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॥ श्री धन्वंतरये नमः ॥

राष्ट्रीय शिक्षण मंडळ, संचालित

आयुर्विद्या

मासिक

शंखं चक्रं जलौकां दधतमृतघटं चारुदोर्भिश्चतुर्भिः ।
सूक्ष्मस्वच्छातिहृद्यांशुकपरिविलसन् मौलिमम्भोजनेत्रम् ॥
कालाम्भोदोज्ज्वलाङ्गम् कटितटविलसद्धारुपीताम्बराढ्यम् ।
वन्दे धन्वन्तरितं निखिलगदवन प्रौढदावाग्निलीलम् ॥
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लोके जरारुग्भयमृत्युनाशनं धातारमीशं विविधौषधीनाम् ॥

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दिवाळी व नववर्षाच्या हार्दिक शुभेच्छा !



CONTENTS

• संपादकीय - कॅन्सरग्रस्तांना दिलासा	- डॉ. दि. प्र. पुराणिक	5
• पुंसवन - चूक की बरोबर ?	- डॉ. नम्रता अनिल घोरपडे	6
• Statistical Approach In Medical Research	- Dr. Uday Neralkar	7
• Ayurvedic Review Of Learning Disability	- Dr. Swapnali Kukawalkar, Dr. Asmita Jadhav	12
• Critical Review Of Vertigo	- Dr. Prakash Guddimath	20
• Case Presentation - Vasicovaginal Fistula - A Review Case - Dr. Gaikwad Dhanraj B.		24
• Animal Meat Global food : Part III	- Dr. A. B. Limaye	26
• सुरक्षित गर्भपात (SAFE ABORTION)	- डॉ. सौ. निर्मला राजेश खैराटे	30
• Ahinsa Week - A Report	- Dr. Aishwarya M. Ranade	29
• प्रथमोपचाराची तोंडओळख - भाग ९	- डॉ. पद्मनाभ केसकर	32
• अभिनंदन !	-	31
• श्रद्धांजली !	-	19
• आरोग्याची घटस्थापना !	- डॉ. अपूर्वा संगोराम	33
• आरोग्यदीप उजळता...	- डॉ. सौ. विनया दीक्षित	34
• About the Submission of Article and Research Paper	-	4

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संपादकीय

कॅन्सरग्रस्तांना दिलासा

डॉ. दिलीप पुराणिक

कोरोना ह्या विषाणूमुळे उदभवलेल्या "COVID 19" ह्या रोगाच्या साथीने जगभर धैर्यमान घातले असून त्याचा संसर्ग झाल्याने कोट्यवधी लोकांना ग्रासले असून त्यापैकी लक्षावधी लोकांचा बळी घेतला आहे. ह्या महामारीसारख्या रोगाच्या साथी, पूर्वीही उदभवलेल्या होत्या. स्पॅनिश फ्लू, सार्स, एच.१.एन.१, इबोला ह्या सारख्या विषाणूजन्य रोगांच्या साथींमुळे पूर्वीही लक्षावधींचा बळी घेतल्याच्या नोंदी आहेत. परंतु अशा प्रकारच्या साथी जगाच्या विशिष्ट भागात येतात, काही दिवस टिकतात आणि काही दिवसानंतर तात्पुरत्या काळासाठी का होईना लुप्त होतात.

परंतु काही रोग असे आहेत की ते विशिष्ट साथींपुरते (Epidemic) मर्यादित नसतात. त्यांचे वास्तव्य चिरकालीन असते. एखाद-दुसऱ्या भागापुरते त्यांचे स्वरूप मर्यादित नसते. किंबहुना सर्व जगभरच ह्या रोगांनी लक्षावधी लोकांना ग्रासलेले आहे; आणि अशा रोगग्रस्त रुग्णांची संख्या दिवसेंदिवस वाढतेच आहे. अशा रोगांमध्ये प्रामुख्याने उल्लेख करावा लागेल तो म्हणजे कर्करोगाचा (Cancer). कर्करोगाची लागण जागतिक स्तरावर लक्षावधी लोकांना होते, लक्षावधींचा त्यामुळे बळी जातो. दरवर्षी कर्करोग होणाऱ्यांची संख्या जागतिक पातळीवर वाढतेच आहे.

सन २०१८ मध्ये केलेल्या जागतिक पातळीवरील सर्वेक्षणानुसार अठरा दशलक्ष नवीन कॅन्सरग्रस्त रुग्णांची नोंद झाली. तर साडेनऊ दशलक्ष कॅन्सरग्रस्तांचा बळी गेलेला आहे. सन २०२० अनुमानानुसार साडेअठरा लक्ष कॅन्सरग्रस्त होण्याची शक्यता असून साडेसहा लक्ष कॅन्सरमुळे बळी जाण्याची शक्यता एकट्या अमेरिकेत होण्याचा अंदाज आहे. जागतिक पातळीवर पाचपैकी एका पुरुषास तर सहापैकी एका स्त्रीला कॅन्सर होण्याचा धोका असतो. स्त्रीयांमध्ये प्रामुख्याने Lungs and Bronchus, Breast, Colon and Rectum, Pancreas, Ovaries चा कॅन्सर होण्याचा धोका असतो आणि ह्याच क्रमाने स्त्रीयांमध्ये मृत्युही येतो.

भारतातही कॅन्सर होण्याचे प्रमाण प्रचंड आहे. सन २०१८ मध्ये भारतात केलेल्या सर्वेक्षणानुसार एक दशलक्षापेक्षाही अधिक कॅन्सरग्रस्त रुग्णांची नोंद झाली असून सुमारे ०.७८ दशलक्ष कॅन्सरग्रस्तांचा बळी गेलेला आहे. एक लाख लोकांमध्ये १५०-२०० लोक कॅन्सरग्रस्त असल्याचे आढळून आले आहे. भारतात प्रामुख्याने महिलांमध्ये Breast, Cervical, Oral Cancer चे प्रमाण अधिक असते तर पुरुषांमध्ये Lungs, Oral, Prostate, Colon, Blood इत्यादींच्या कॅन्सरचे प्रमाण अधिक आढळते. पुढील पाच वर्षात भारतातील कॅन्सरग्रस्तांचे प्रमाण १२% वाढण्याचे अनुमान आहे. भारतात कॅन्सर होण्याची विविध कारणे सांगितली जातात. त्यामध्ये प्रामुख्याने दारिद्र्य, काबाडकष्टाचे उन्हातान्हात काम, तणाव, तंबाखू, धुम्रपान, मद्यपान तर स्त्रीयांमध्ये ह्या खेरीज गर्भनिरोधक औषधांचा अतिवापर ही कारणे सांगितली जातात. ह्याचबरोबर अनुवंशिकता हे कारणही सांगितले जाते.

सुरवातीच्या काळात, ज्यावेळी वैद्यकीय क्षेत्र फार प्रगत नव्हते

तेव्हा "कॅन्सर" म्हटले की साक्षात "मृत्यु" असेच समजले जाई. परंतु पुढे आधुनिक वैद्यकाने सर्वच आघाड्यांवर संशोधनातून खूपच प्रगती केली. रोगनिदानाच्या नवनवीन पद्धतीमुळे कॅन्सरचे निदान करणे शक्य झाल्याने पुढे चिकित्सा करणेही शक्य झाले. सर्जरीमधील आधुनिक व विकसित तंत्रज्ञान, केमोथेरपी, रेडीएशन थेरपी, बोन मॅरो ट्रान्सप्लांट, इम्युनोथेरपी, हार्मोन थेरपी, टारगेटेड ड्रग थेरपी, क्रायोअॅब्लेशन ह्या सारख्या चिकित्सा प्रणालींमुळे (Treatment Modalities) एरवी असाध्य वाटणारा कॅन्सर बऱ्याच प्रमाणात आटोक्यात आला.

आधुनिक चिकित्सा मिळूनही कॅन्सर पूर्ण बरा होण्याचे प्रमाण मर्यादितच राहिले. कॅन्सरवर विविध चिकित्सा केली तरी त्याचा पुनरुदभव होणे, तसेच सर्जरी नंतरच्या रेडीएशन, केमोथेरपीमुळे केस गळणे, त्वचेची आग होणे, वेदना असह्य होणे, ह्यामुळे कॅन्सरग्रस्तांचे जीवन खूपच क्लेशकारक होत असे. ह्यासाठी "Palliative Care" माध्यमातून कॅन्सरग्रस्तांचा जीवनस्तर सुधारण्याचा प्रयत्न होतो.

आयुर्वेदामध्येही "कॅन्सर" ह्या व्याधीसंबंधात "अर्बुद" नावाने सविस्तर वर्णन आहे. अर्बुदाचे प्रकार, त्याचे साध्यासाध्यत्व, चिकित्सा ह्याचे वर्णन आहे. ह्यासाठीच संशोधनात्मक दृष्टीकोनातून कांही अनुसंधान संस्थांमध्ये कॅन्सरवर आधुनिक पद्धतिने संशोधन सुरू झाले. पुनरुदभव होवू नये, रेडीएशन, केमोमुळे होत असलेले उपद्रव होवू नयेत आणि रुग्णांना वेदना होवू नयेत व जीवनाचा स्तर उंचावण्यासाठी अर्वाचिन वैद्यकीय तज्ज्ञांच्या सहकार्याने, सहभागाने संशोधन सुरू झाले आणि त्याचे अतिशय फलदायी निष्कर्ष पुढे आले आहेत.

ह्या संस्थांमध्ये पुण्यातील भारतीय संस्कृती दर्शन ट्रस्टच्या वाघोली येथील "कॅन्सर रिसर्च सेंटर" मध्ये मुंबईच्या टाटा कॅन्सर रिसर्च इन्स्टिट्यूटच्या सहकार्यातून व संशोधनातून कॅन्सर ग्रस्तांसाठी विकसित केलेल्या "AYUSH KIT" चे नुकतेच महाराष्ट्राचे राज्यपाल मा. श्री. कोश्यारी ह्यांच्या हस्ते विमोचन करण्यात आले. ह्याप्रसंगी टाटा कॅन्सर इन्स्टिट्यूटच्या संचालकांनी व्यक्त केलेल्या विचारात, "आम्हाला या प्रकल्पात सहभागी होता आले हे आम्ही भाग्य समजतो" असे म्हटले त्याचा आयुर्वेद जगतास नक्कीच अभिमान वाटला असेल.

पुण्यातीलच दुसरी "रसायू कॅन्सर संशोधन संस्था". ह्या संस्थेमध्येही कॅन्सरवर आधुनिक पद्धतीने संशोधन होत असून कॅन्सरग्रस्तांसाठी संशोधित केलेली आयुर्वेदीक चिकित्सा प्रणाली आंतरराष्ट्रीय स्तरावर झालेल्या परीषदेत सादर केली व त्यानिमित्ताने त्यास मान्यताही मिळाली.

कॅन्सरग्रस्तांसाठी दोन्ही संस्थांनी केलेल्या व करत असलेल्या संशोधनाचे व संशोधकांचे ह्या निमित्ताने हार्दिक अभिनंदन. अर्वाचिन वैद्यक व आयुर्वेद ह्यांच्या मिलाफातून कॅन्सरग्रस्तांना दिलासा मिळाल्यास सर्व कॅन्सरग्रस्तांचा दुवा निश्चितच मिळेल.



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5

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पुंसवन - चूक की बरोबर ?

डॉ. नम्रता अनिल घोरपडे,

बी.ए.एम.एस., एमडी (रचना शरीर), सहाय्यक प्राध्यापक
रचना शारीर विभाग, आनंद आयुर्वेद महाविद्यालय, वैजापूर

प्रस्तावना - इच्छित लिंगाचे अपत्य प्राप्तीसाठी केल्या जाणाऱ्या विधीस पुंसवन विधी म्हणतात. (च.शा.११/८ चक्र टी)

आयुर्वेदोक्त ग्रंथानुसार अवयवव्यक्तीभावापूर्वी पुंसवन विधी केल्यास इच्छित लिंगाची अपत्या प्राप्ती होणे शक्य आहे. आचार्य चरकानुसार स्त्री बीज व पुं बीज यांचा संयोग पश्चात परंतू अवयव व्यक्ती भावापूर्वी दोन मासपर्यंत पुंसवन विधी करावा (च.शा.८/१९); तर सुश्रुताचार्यानुसार पुंसवन विधी हा स्त्री बीज व पुं बीज यांचा संयोग झाल्यावर तात्काळ करावा, ज्याला त्यांनी लब्धगर्भ अवस्था असे वर्णिले आहे (सु.शा.२/३२). अष्टांग संग्रहानुसार पुंसवन विधी हा केवळ पुष्य नक्षत्रावर करावा आणि त्याचा काळ त्यांनी १२ दिवसांचा सांगितलेला असून त्यातही केवळ सम दिवसांचा उल्लेख केलेला आहे. शिवाय अंतीम फलप्राप्ती ही स्त्री व पुरुष बीज संयोगाच्या वेळीच होते. (स.शा.३/४)

उद्देश - संहितेत पुंसवन विधी संकल्पना का केली असावी हे अध्ययन करणे.

संकलन -

तत्र शुक्रबाहुल्यात पुमान् आर्तव बाहुल्यात् स्त्री

साम्यादुभयोनपुंसाकमिति ॥ (स.शा.३/४)

शुक्राचे प्रमाण अधिक असल्यास पुरुष अपत्य तर आर्तवाचे अधिक्य असल्यास स्त्री अपत्य जन्माला येते. समस्त सृष्टी मध्य कार्यकारणभावाला विशेष महत्व दिले गेलेले आहे आणि कारणाच्या अनुरूपच समस्त कार्य घडत असते.

कारणानुविधायित्वात् कार्याणां तत्त्वभावता ।

नानायोऽन्याकृतिः सत्वो धत्तेऽतो द्रुतलोहवत् ।

अत एव च शुक्रस्य बाहुल्याज्जायते पुमान् ॥ (अ.ह.शा.१/४)

कार्यं हि कारणस्वरूपामनुगच्छति तथा च तिलेभ्यस्तिला एव जायन्ते न माषाः । (अ.सं.शा.२/७७)

अत एव च कारणानुविधायित्वादेवा पुंस्कारणस्य शुक्रस्य बाहुल्यात पुमान् जायते ॥ (अ.सं.शा.२/७८ इन्दु टिका)

जसे तीळापासून तीळाची उत्पत्ती होते उडदाची नव्हे, तसेच शुक्रबाहुल्य असल्यास पुत्राची उत्पत्ती होते कन्येची नव्हे.

तसेच गर्भ संभव व लिंग संभव ह्या क्रिया एकाच युगपतांत क्षणी होतात असे पुढील सूत्रा वरून स्पष्ट होते.

“अस्य इन्द्रियाणि अङ्ग अवयवः च यौगपद्येन अभिनिवर्तन्ते तस्य य एवं अङ्ग अवयवः सत्तिष्ठन्ते त एवं स्रह लिङ्ग पुरुष

लिङ्ग नपुंसक लिङ्ग वा विभ्रति ॥” (च.शा.४/१४)

गर्भाचे सर्व अवयव आणि इन्द्रिये एकाच वेळी, युगपत् उत्पन्न होतात आणि गर्भात बीज रूपाने असलेले अवयव पुढे स्त्री किंवा पुरुष लिङ्ग त्याच वेळी उपस्थित असतात असे स्पष्टपणे उल्लेख केला आहे.

तसेच सुश्रुताचार्यांनी जास्त मत स्पष्ट करत सांगितले आहे कि “एवं गर्भस्य तारुण्ये सर्वेषु अङ्ग प्रत्येङ्गेषु सत्साऽपि सौक्ष्म्यात् अन् प्रकर्षात् प्रव्यक्तानि भवन्ति ॥” (सु.शा.३/१८)

वरील सूत्रावरून हे स्पष्ट होते कि ज्या वेळी स्त्री व पुरुष बीज यांचा संयोग होतो तो एक क्षणच गर्भ व लिंग संभव निर्णायक असतो.

तसेच चरकाचार्यांनी शारीरस्थान (च.शा.४/९) मध्ये प्रथम मासामध्ये सर्व धातु अव्यक्त असतात तसेच सर्व सत् व असत् अवयव अव्यक्त असतात मात्र वत् अवयव बीज रूपाने विद्यमान असतात असे सांगितले आहे.

या वरील चक्रपाणीची टीका

“धातु सद्देन च भूतानि उच्यन्ते ॥” किंवा

“सदसद्रभूत अंग अवयवः इति विद्यमान अविद्यमान अङ्गण प्रत्यंग इति अङ्गानां च बीज रूपात स्थितत्वेन तत्त्वम् अव्यक्त भावात् च असत्त्वम् ॥”

सत् अवयवाची बीज रूपे प्रथममासातच विद्यमान असतात. सर्व धातु, पंचमहाभूते अव्यक्त असली तरी त्यांची निर्मिती गर्भ निर्माण समयीच होते. परंतू प्रश्न असा की गर्भ निर्माण आणि त्यातील रसादि धातू बीजे सद अवयव ह्यांचा निर्माण काळ कोणता ? ह्याचे उत्तर चरकाचार्या असे देतात कि (च.शा.४/८) शुक्र गर्भाशयात आर्तवा बरोबर संमिश्रित झाल्यावर पांचभौतिक देहधारणाचे कार्य “अणु कालात” संभवत. देहधारण म्हणजे शरीरातील पांचभौतिक अवयवाची उत्पत्ती गर्भसंभवानंतर अणुकालातच बीज रूपाने संभवते.

पद्धती - आयुर्वेदिक ग्रंथांचे पुनरावलोकन करून पुंसवन ह्या विषयाची माहितीचे संकलन करून गंभीर पुनरावलोकन केले व खालील निरीक्षण प्राप्त झाले.

निरीक्षण - फलनाचा वेळीच गर्भच्या लिङ्ग अवयव स्वरूपास निश्चित निर्मिती होते परंतू फक्त ते सूक्ष्मत्वाने उपस्थित असतात. म्हणूनच वरील सांगितलेल्या पुंसवन विधी मध्ये गर्भनिर्मितीच्या नंतर लिङ्ग निर्मिती ही अवयव व्यक्ती भाव

झाल्यावर होते हा मुद्दा शिल्लक राहत नाही.

निष्कर्ष – पुंसवन विधी हा नस्याने वा अभ्यंतर औषधपान याने करावे असा उल्लेख संहितेत आलेला आहे. हा विधी अत्यंत सहज आहे व त्यामुळे ह्या विधीमध्ये सूक्ष्मत्वेने उत्पन्न झालेल्या लिंग अवयवामध्ये बदल घडून आणण्याची क्षमता असणे शक्य वाटत नाही.

जसा संहितेत उल्लेख आहे कि (च.शा.४/१९) गर्भिणीच्या मनास अनुकूल असा आहार विहार उपलब्ध करून देण्यात यावे ज्याचा गर्भावर अनुकूल परिणाम होतो त्याचप्रमाणे पुंसवन विधी हा गर्भिणीच्या मानसिकतेवर

अनुकूल परिणाम घडवून आणण्यासाठी दिला असावा असे वाटते.

संदर्भ – १) **चरक संहिता** – लेखक वैद्य यादवजी त्रीकिमजी आचार्य, चौखंबा संस्कृत संस्थान वाराणसी पाचवी आवृत्ती, २००१.

२) **सुश्रुत संहिता** – लेखक आचार्य शर्मा. पी. चौखंबा संस्कृत संस्थान वाराणसी पुर्न आवृत्ती, २००३.

३) **अष्टांग हृदय** – लेखक गुप्ता के ए, चौखंबा संस्कृत संस्थान वाराणसी आवृत्ती, २००१.

४) **अष्टांग संग्रह** – लेखक गुप्ता के ए, चौखंबा संस्कृत संस्थान वाराणसी आवृत्ती, २००२.



Statistical Approach In Medical Research

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Aim : To study the role of statistics in Medical Research.

Objectives : 1) Study the biostatistics with special reference to statistical methods.

2) To explore Ability to perform research work and statistical analysis in bioscience.

Introduction : Statistics is known as science of numbers. It means a measured or counted fact or piece of information stated as a figure such as height of one person, birth weight of a baby, etc. Statistics is a tool to analyze the problem and to find the suitable solution over it. It is found really useful in research purposes. The term 'Biostatistics' is nothing but the use of statistics in biological sciences or medical field. It is a science of study concerned with methods of, collecting, classification, summarizing, interpretation and drawing inferences of research data or facts. Nowadays statistics is widely used as health sciences, as public health, in medicine and vital statistics in studies pertical to demography.

• **Statistical tools used in research :** Statistical tools to quantify such comparisons are the F-Test (fisher's test), the t-tests and regression analysis. the F-test and t-tests are most basic tests.

Basic statistics : In basic of statistics, one

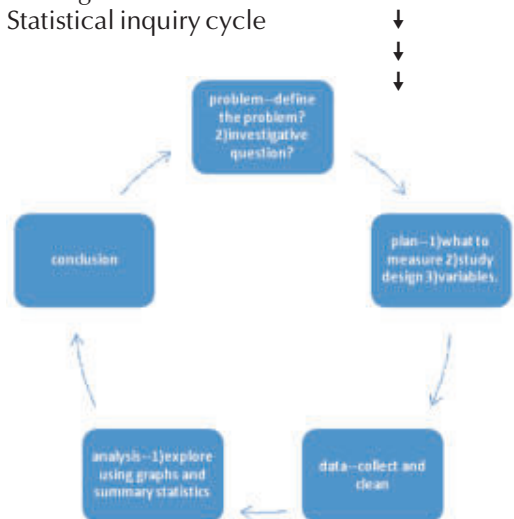
should consider about mean (arithmetic mean) median, mode. The standard deviation (SD), relative SD, variables, coefficient of variations, confidence limits of measurent, propagation of errors. These are useful in research work.

Role of statistics in research : Validity :

Will this study help answer the research question ? **Analysis :** What analysis and how should this interpreted and reported .

Efficiency : Is this experiment the correct size making best use of resources ?

Statistical inquiry cycle



Statistics : Statistics is a science, it is expressed in numbers. It is used to present a established fact and reach to a new conclusion. It is also called as, statistics is method science which deals with the collection, organization, analysis, of data and drawing of inferences from samples to the whole population(1). In a research study application of statistical method requires a proper design ,an appropriate selection of the sample and choice of suitable test.

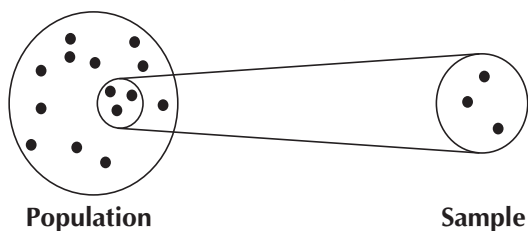
Statistics have main two branches :

1)Descriptive statistics : This type of research is carried out to collect the fact. Example- presence of any disease. Descriptive study collected data is very large or scattered. So ,the collected data be organized, summarize needs to and communicated numerical information. In this study research is done as case report, prevalence studies, population survey etc.

2) Inferential statistics : In inferential statistics data is elaborated through samples, to draw conclusions or inferences about a population .

Role of statistics in research :

- Designing research • Analyzing data • Draw conclusion about research target population.



Steps of statistics for numerical data by Croxton Rooden

- Collection of data • Organization of data Edition, Classification, Tabulation.
- Presentation • Analysis • Interpretation.

Data means - it is basic requirement of statistics or a set of values recorded on one or more observations data are raw material of statistics.

Population - It is called as study population or entire group of people or study elements. ie: persons, things or measurements It may be

infinite vaccinated, died, cured, relived or finite an such as attacked, escaped. Such a population invariably gives **Qualitative data**.

A statistical population may also be birth , weight, height, hemoglobin levels, RBCs in number in human, readings of thermometer etc. It gives **Quantitative data**.

Collection of data

- Aim and objective • Scope • Fundamental units • Accuracy • Collection

Primary collection of data :

- Direct personal interview.
- Indirect personal interview.
- Interview through representative.
- Question answer by post or telephonic conversation.
- Information through drafted format.

Secondary collection : When researchers are unable to collect the data personally or required data is available in other sources , so he/she should collect the data from-
Published data

Un published data

Government published report

WHO/UNICEF research study data

Reports by central governments

through sensus	--collection method –	sampling method
primary collection or secondary collectcollection		primary collection or secondary collection

collection method

Reports of Zilha Parishad, Tahsil, Municipal Corporation and any other research centers.

Organization of data in three steps

- Editing • Classification • Tabulation

While editing every one should sort out the data, is it complete, whether consistency is there, accuracy and the data is homogeneous or not.

Classification of data : Classification is done, by shortly and properly. Comparative tabulation is expected and the work information or data presentation can be

observed at a glance and scripted with majorly related with importance.

Classification is done as below.

Geographical classification

Chronological classification

Qualitative classification :

Quantitative classification Tabulation

Sorted and classified data is to be tabulate in a table

Title of table

Note Head

Title of Column

Title of rows

	Title of column	
Body of table		
		RT
CT		GT

Foot note RT-row total

CT-Column total

GT-grand total

Table number. ☐

Tables

- 1) Frequency distribution table(one way table)
- 2) Two way table (2x2table)
- 3) Higher order table (2 or more attributes are used)
- 4) When in a single all variable table it is called Master table.

Two types of tables

1) simple table-or General purpose table-single set of items

2) Compound table or Complex table- Specific purpose table multiple set of items.

Gradation of parameters

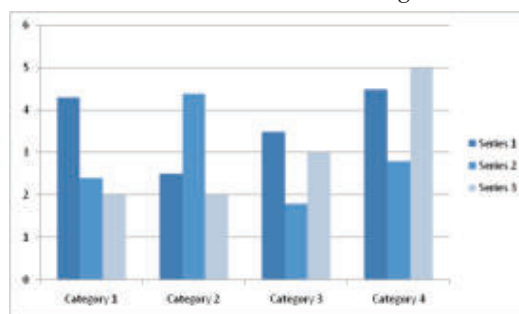
Mainly gradations are done for subjective as well as objective parameters

- 1)no sign and symptoms (normal) ---"0" grade
- 2)Mild sign and symptoms -----"1"
- 3)Medium -----"2"
- 4)moderate -----"3"
- 5) Severe -----"4"

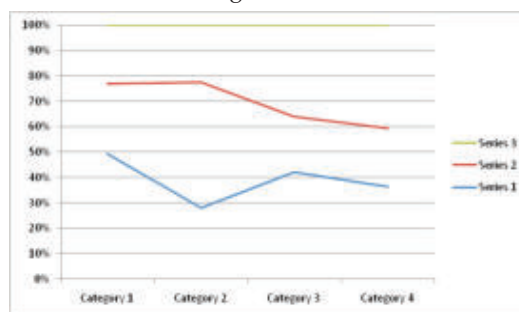
Two main methods of Presentation

Data can be presented as

- 1) tabulation
- 2) drawing



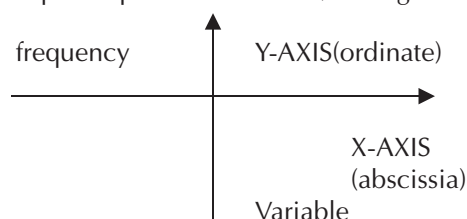
Diagrammatic



Graphical

Presentation of Quantitative Data

Graphical presentation as 1) Histogram



It is a graphical presentation of frequency distribution.

X-axis - variable characters of the group are indicated on the horizontal line

Y-axis - is called as ordinate it denotes frequency ie. number of observations is marked on vertical line.

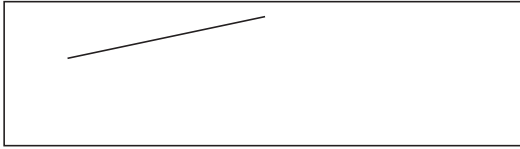
Frequency of each group forms a Column or rectangle. Such a diagram is called as "Histogram" and it is used for presenting any quantitative data.

2)Frequency Polygon - it gives a polygon ie:a figure with many angles.

3)Frequency Curve - when the observations

are very large and group of interval is reduced frequency gives angulations points, place to smooth curve.

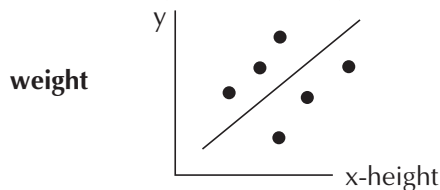
4) Line chart or Graph - frequency polygon presenting variation by line.



5) Cumulative frequency diagram or "ogive"- Here cumulative means increasing. Ogive is a graph of the cumulative relative frequency distribution. Here quantitative data has to be converted into a relative cumulative frequency.

What is cumulative frequency ? Cumulative frequency is the total number of persons or frequency in each particular range from lowest value of characteristic up to and including any higher group value.

Scatter or Dot diagram or XY diagram:



it is a scatter plot or mathematical diagram using Cartesian coordinates to display values for typically two variables for a set of data and it have been crossed classified

The nature of correlation between two variable characters X and Y. Here in above diagram X-denote height and Y denote - weight. Hence it is also called Correlation diagram.

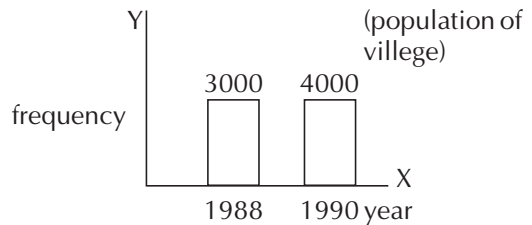
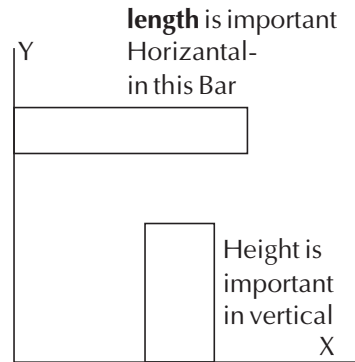
The line is drawn to show the nature of correlation at a glance as in figure.

Presentation of Qualitative data :

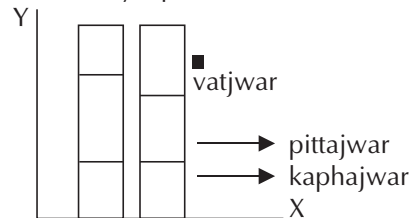
1) Bar Diagram: Bar diagram is widely used to comparison of the magnitude of different frequencies in discrete data it have length of the bars, drawn vertical or horizontal, which indicates the frequency of character. Discrete means-individually separate and distinct.

Types

- Simple Bar diagram
- Inter divided Bar diagram
- Multiple Bar diagram
- Percentage Internal divided Bar



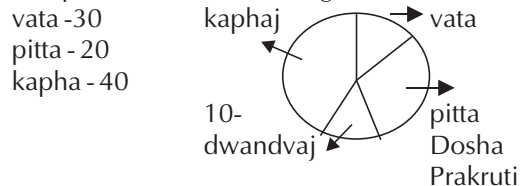
In this Bar Diagram the distance of Two bar is remains nearly equal.



Subdivided Bar Diagram. (Ref. - vaidyikiy sankhyakishashastra by Dr. sawarikar Shreeram).

Pie or Sector Diagram :

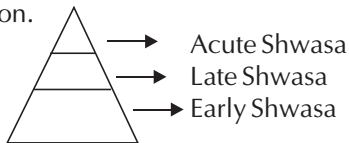
Qualitative data : is presented such as age group, gender, dosha prakruti group in a population, the frequencies of the groups are shown in circle. Degree of angle denotes the frequency and area of the sector. It gives comparative difference at a glance.



Pictogram or picture diagram

Pictogram or picture diagram denotes as

Ayurved hospital incoming patients of attack of Tamak Shwasa from Maharashtra state population.



MAP Diagram or Spot Map

The maps are prepared to show geographical distribution of frequencies of Characteristic. The figure below in state wise map of India, indicates the IMR (infant mortality rate) in the state which is lowest of 10 in Goa and highest of 78 in Maharashtra.



Figure 2.17 Estimated infant mortality rates—2011

(Ref.-mahajan's method in Biostatistics

Measures of Observations (Variable) and Averages : In any large series one gets information from observations noted in table. This table is form sample or frequency distribution one can calculate the average or Central Value from it has the average value.

Characteristic, the observations dispersed from central value in any series nearly 50% of observations lie above and 50% observations lie below the central value.

From this series firstly one observes the lie of normal observations and how, they are

dispersed around the central value and also compare, the group which is better and draw the average. There are three types of averages or measures of central position

Or Central Tendency. ie. Mean, Median and Mode.

Mean: It is arithmetic average or arithmetic Mean. Which is obtained by summing up all observations and dividing by total number.

$X_1, X_2, X_3, \dots, X_n$

$$\bar{X} = \frac{X_1 + X_2 + X_3 + \dots + X_n}{n} = \frac{\sum x}{n}$$

Median: When all observations of variables are arranged in either ascending and descending order, the middle observation is known as Median for ungrouped series, median = $n+1/2$ where grouped series, median = total no. of observations / 2

Mode : In observation series ie: most common or frequently occurring observation. Ex: 8mm in tuberculin test of 10 boys given below.
3,5,7,7,8,8,10,11,12 mode is rarely used in medical studies.

Out of above Three Measures of Central Tendency, Mean is better and utilized more often because it useful in all observations in the data and Test of Significance.

Normal Distribution : When large numbers of observations of any variable characteristic, such as height, blood pressure and pulse rate are taken at random to make it a representative sample, a frequency distribution table is prepared by keeping group interval small, then it can be seen that,

- Some observations are above the mean and others are below the mean.
- If they are arranged in order, deviating towards the extreme from the mean, on
- Plus or minus side maximum number or frequencies can be seen middle around
- The mean and fewer at the extremes, decreasing smoothly on the both sides.
- Normally, almost half the observations lie above and half below the mean and
- All observations are symmetrical on each side of the mean.

• A distribution of this nature or shape is called Normal Distribution or Gaussian Distribution. **Normal distribution** of observations is a virtue of a large random sample. It is one of the standard distribution in nature. It can be Arithametically expressed as in terms of Mean and Standard Deviation(SD).

A) Mean $\pm$ 1SD-limits, include 68.27% or roughly 2/3 rd of all the observations. And out of the remaining 1/3rd observations half ie: 1/6

will lie below the lower limit Mean (-) 1SD and other half, ie: 1/6 will lie above the upper limit Mean (+) 1SD in other words, some 32% will lie outside the range, Mean $\pm$ 1SD

B) Mean $\pm$ 2SD limits, include 95.45% of observations while 4.55% of observations will be outside these limits, similarly Mean $\pm$ 1.96 SD limits, include 95% of all observations.

(To be continued in next issue)



डॉ. सुनंदा रानडे व डॉ. सुभाष रानडे फौंडेशन तर्फे उत्तेजनार्थ पारितोषिक प्राप्त लेख...

Ayurvedic Review Of Learning Disability

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Introduction - Ayurveda has been prominent in the Indian society from the pre historic times. The concept of disease management using various herbs and dietary interventions evolved into a science that formed the basis of Ayurveda around 2500 to 600 BC. As the Upveda of Atharvaveda, Ayurveda here is described in great detail with the emphasis on identification and removal of the root cause of the disease as a part of its holistic healing approach. The health of a person is reflected on the built of the body and the freshness of the mind and soul (Su.Su15/44). The aim of Ayurveda is to maintain health and then to cure diseases (if any).

समदोषः समाग्निश्च समधातुमलक्रिया।

प्रसन्नात्मेन्द्रियमनः स्वस्थ इत्यभिधीयते ॥ सु.सू. १५/४४

At the peak of scientific and technological development, the world is unable to seek solutions to many psychological problems. In the developing scenario, there has been a great rise in the cases of psychotic disorders, various health hazards and stress among the children. Fiercely competitive struggle for marks and career options has affected the children in a very negative way. A child's mental health is equally important as its physical health. Having a healthy and open relation with the parents, teachers and friends keeps the child mentally healthy. The continuous rise in the various psychotic

disorders have developed new challenges in treating them. The limitations of widely used modern medical sciences in coping with them have regenerated a new interest in the ancient science.

The term learning disabilities emerged from a need to identify and help children who repeatedly show poor scholastic performance, yet are not mentally retarded. Dyslexia is one of the commonest learning disability. It is a disorder where a child, in spite of all the classroom teaching, is not able to attain the language skills of reading, writing and spelling according to their level of intelligence. Dyslexic individual often have difficulty in relating to the association between sound and their respective letters. Reversing or transporting the letters while writing is characteristic with letters such as b and d, p and q etc.

Symptoms are usually noticed once the children become 5 or 6 years in age of starting schooling. The effects of dyslexia can adversely affect the self-esteem, future goals, peer and family relationships and child's ability to progress through subsequent developmental stages. It has been estimated that there has been a complex interaction among genetics, biology, cognition, behaviour, temperament, family factors, environment and social factors in the genesis

of dyslexia.

In the Indian context, prevalence rates are estimated to range between 9-39%. Considering the high prevalence of Specific Learning Disabilities in Primary school children, it is important to use an effective treatment protocol in the management of Learning Disabilities.

Aim : To interpret the concept of Learning Disability with the Ayurvedic concept of acquisition of knowledge and related Psychosomatic disorders.

Objectives : • To review the concept of Learning Disability from the available modern Psychology books.

- To review the concept of acquisition of knowledge and related Psychosomatic disorders from various Ayurvedic texts.
- To interpret the concept of Learning Disability with the Ayurvedic concept of acquisition of knowledge and Psychosomatic disorders and establish a correlation between them.

Material And Methods : The concept of Learning Disability was reviewed thoroughly from various Psychology books. The Ayurvedic concept of acquisition of knowledge and Psychosomatic disorders was reviewed from various Granthas and texts.

1) Review Of Learning Disability

A) Definition - The National Joint Committee on Learning Disabilities defined Learning Disability as a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or Mathematical skills.

B) Common Forms of Learning Disability -

i) Learning Disabilities in Reading - Dyslexia
It occurs when there is difficulty in understanding the relationship between sounds, letters and words. Some children have problems sounding out words, while others have trouble with rhyming words such as cat and bat. The signs of Dyslexia include problems with letter and word recognition, understanding words and ideas, reading speed and fluency and general vocabulary skills.

ii) Learning Disabilities in Writing -

Dysgraphia Learning disabilities in writing involve the physical act of writing or the mental activity of comprehending and synthesizing information. Basic writing disorder refers to physical difficulty forming words and letters. Expressive writing disability indicates a struggle organising thoughts on paper. The signs of Dysgraphia include problems with neatness and consistency of writing, accurately copying letters and words, spelling consistency, writing organisation and coherence.

iii) Learning disabilities in Math - Dyscalculia

Learning disabilities in math may vary from difficulty in sequencing, memory or organisation of numbers or signs. A child may struggle with memorization and organisation of numbers, operation signs and number facts like $5+5=10$ or $5*5=25$. They may also have trouble with counting principles or have difficulty telling time.

iv) Learning disabilities in motor skills -

Dyspraxia Motor difficulty refers to problems with movement and coordination including both fine motor and gross motor skills. A motor disability sometimes referred to as an output activity meaning that it relates to the output information from the brain. The signs of Dyspraxia include problems with physical abilities that require hand eye coordination like holding a pencil.

v) Learning disabilities in language -

Dysphasia Language disabilities involve the ability to understand or organize thoughts in the brain and call upon the right words while explain something or communicating with someone else. The signs of Dysphasia involve problems with verbal language skills, fluency of speech, understanding the meaning of the words, parts of speech, directions etc.

vi) Auditory and Visual Processing Disorder

Auditory processing disorder involves an inability to distinguish between sounds or hearing sounds at the wrong speed, which makes it difficult to understand the basic concepts of reading and writing. Visual processing disorder include missing differences in shapes, reversing letters or numbers, skipping words, skipping lines and

having problems with eye-hand coordination.

C) Specific Symptoms of Learning Disability according to age group -

Pre School (3 to 5 years) -

- Speaks later than most children.
- Pronunciation problems.
- Slow vocabulary growth often unable to find the right word.
- Difficulty rhyming words.
- Trouble learning numbers, alphabets, days of the week, colours, shapes.
- Extremely restless and easily distracted.
- Trouble interacting with peers.

- Difficulty following directions or routines.
- Fine motor skills slow to develop.

Grades KG to 4th (5 to 10 years) -

- Slow to learn the connection between letters and sounds.
- Confuses basic words.
- Makes consistent reading and spelling errors.
- Transposes number sequences and confuses arithmetic signs.
- Slow to remember facts.
- Slow to remember new skills, relies heavily on memorization.
- Impulsive, difficulty planning.
- Unstable pencil grip.
- Trouble learning about time.
- Poor coordination, unaware of physical surroundings, prone to accidents.

Grades 5 to 8 (10 to 14 years) -

- Reverses letter sequences (soiled/solid, left/felt).
- Slow to learn prefixes, suffixes and other words and other spelling strategies.
- Avoids reading aloud.
- Trouble with word problems.

- Difficulty with handwriting
- Awkward, fist like or tight pencil grip.
- Avoids writing assignments.
- Slow or poor recall of facts.

- Difficulty making friends.
- Trouble understanding body language and facial expressions.

D) Causative factors of Learning Disability -

- **Pre conceptual factors** - Consanguineous marriage, history of still birth, spontaneous abortion, medical or surgical events before pregnancy, family history of LD.

- **Ante natal factors** - Less number of pre-natal visits, emotional stress during pregnancy, drug intake during pregnancy, singleton pregnancy.

- **Intra natal factors** - Problems during pregnancy, vertex presentation and events during intra natal period, injury during birth.

- **Neonatal factors** - Low APGAR score.

- **Occasionally** certain medical conditions such as neurological illness or chronic childhood ear infections may also alter the neurological development or structure of the brain as well, creating a learning disability.

- **Environmental** factors such as cultural deprivation or parenting and teaching styles may heighten the impact of a neurological deficit, but they are not the cause.

- **Risk factors** are foetal exposure to alcohol or drugs and low birth weight. These children are more likely to develop a disability in math or reading. Children who are born prematurely, late, have a longer labour than usual or have trouble receiving oxygen are more likely to develop a learning disability.

- **It can** also be caused by head injuries, malnutrition or by toxic exposure such as heavy metals or pesticides.

E) Treatment of Learning Disability -

- For children that have specific Language disorder with impairment in Maths. **Visual techniques** : draw pictures. **Use of memory aids** : Rhymes and music. **Use of Computers**.

- For children that have specific language disorder with impairment in written expression. **Special tools** : videotape reports. **Use of technology** : word processing programs, audio recorder.

- For children with impairment in reading.

Special teaching techniques.

Classroom modifications. Use of technology.

2) Ayurvedic Review Of Learning Disability - According to Ayurveda, learning or acquisition of knowledge is a result of successive and complex interaction and coordination of Indriays (cognitive and motor organs), Indriyartha (sense organs), Mana, Atma and Buddhi. Above all, the functioning of these factors is governed by Tridoshas (Vaata, Pitta and Kapha) and Trigunas (Sattva, Raja and Tama) in a specific coordination and balance. Any disturbance in these Tridoshas and Trigunas causes disordered functioning of Indriya, Mana and Buddhi leading to impaired learning or dyslexia. Ayurvedic drugs help in the management of dyslexia by making these

Tridoshas and Trigunas in a well-balanced state, by nourishment of the Dhatus, by increasing the Agni (Koshthagni and Dhatvagni) and also by providing Medhya (intellect promoting) effect to improve the learning ability in these children.

A) Process of Acquiring knowledge :

- In the process of acquiring knowledge a chain is established as follows -

आत्मा मनसः संयुज्यते मनः इन्द्रियेण इन्द्रियम् अर्थेन ततो ज्ञानम् ।
त.सं.

- Atma conjugates with Mana, Mana then conjugates with sense organs, and the specific sense organ then perceives the specific sense. The perceived information is brought back to Atma through the chain of sense organs, Mana and is then established as knowledge.

B) Role of components of DyanaPrakriya in Learning Disability : Aatma, Manas, Indriya, and Artha are the links of DyanaPrakriya or process of perception or learning. Any disturbance or impaired function of the components of this link will result in perverted knowledge, false knowledge or no knowledge at all. In learning disability there may be impairment in function of one more of the components of learning process.

a) Dhi (Buddhi) : • If something useful is viewed and treated as harmful and something harmful is viewed and treated as useful, this is indicative of the impairment of the intellect (Buddhi). Acharya Charaka terms it as Buddhi Vibhramsha (Cha.Sha.1/99).

विषमाभिनिवेशी यो नित्यानित्ये हिताहिते।

ज्ञेयः स बुद्धिविभ्रंशः समं बुद्धिर्हि पश्यति॥ च.शा.१/९९

- In case of learning disorders or backwardness in scholastic skills there may be 'Buddhi Vibhramsha' because of which the child may not be able to judge properly and he may write 'p' instead of 'q' or vice versa.

- The child may not be able to understand and read correctly, as its Buddhi is not able to see things as it is.

- Acharya Charak while explaining Buddhi further elaborates that depending upon the different functions and different faculties there are different types of intellects (Buddhi) and it differs according to the relation of the Atma

with the Mana, Indriya and Indriyarthas.
भेदात् कार्येन्द्रियार्थानां बहुवयो व बुद्धयः स्मृताः।

आत्मेन्द्रिमनोअर्थानामेवैका सन्निकर्षजा॥ च.शा.१/३३

या यदिन्द्रियमाश्रित्य जन्तोर्बुद्धिः प्रवर्ततं।

याति सा तेन निर्देशं मनसा च मनोभवा॥ च.शा.१/३२

- So in the case of Learning Disability though there are normal visual and auditory pathways, but still the child perceives differently the written letters or words or writes differently that is heard. So here there may be impairment in only that particular perceptual faculty or intellect which deals specifically with reading, writing or calculations.

b) Dhriti : • Impairment of Dhriti will lead to loss of control over senses in sustaining the perceived knowledge. The impaired Dhriti along with 'Vibhram Manas' will lead to inattention. Hence perception of the knowledge will not be possible. In Learning Disability most of the children have problem with attention and concentration.

विषयप्रवणं सत्त्वं धृतिभ्रंशान्न शक्यते।

नियन्तुमहितादर्थत् धृतिर्हि नियमात्मिका॥ च.शा.१/१००

c) Smriti : • Rajas and Tamas are the most important factors in the impairment of memory. If mind is covered with Rajas and Tamas, one cannot recollect all the knowledge, and tends to forget all the memorable things. Smriti Vibhramsha further leads to Buddhi Vibhramsha as Buddhi is mostly dependent on Smriti.

तत्त्वज्ञाने स्मृतिर्यस्य रजोमोहावृतात्मनः।

भ्रंश्यते स स्मृतिभ्रंशः स्मर्तव्यं हि स्मृतौ स्थितम्॥ च.शा.१/१०१

- According to Chakrapani, Uha-poha Vichar (logical thinking) and Smriti (memory) are nothing but Buddhi (intellect) Cha.Sha.4/39.

- It is obvious that without Smriti the function of Buddhi is impossible. Buddhi cannot work without Uha-Poha Vichar, which comes through Smriti or past experience. Acharya Charak says when Smriti occurs, it will give rise to Buddhi by Uha and Vichar. Due to Smriti Vibhramsha, the Buddhi of the person is not clear.

बुद्ध्यङ्गानि ऊहापोहविचारस्मृत्यादीनि उक्तानि। च.शा.४/३९
चक्र. टिका.

d) Manas : • Impaired function of mind or perversion of mind leads the patient to think of

such things, which are not worthy of thinking and to think of the things which are worthy of thinking. This may lead to Learning Disability at gross level where child may not be able to concentrate to learn the academic skills. Manas covered with Rajas and Tamas will lead to so many emotional and behavioural problems, which creates barrier in learning problems.

e) Indriya : • The person with perverted auditory, visual senses will not be able to understand 'the taught material' properly and impaired function of skills and eye co-ordination will lead to difficulty in expressing and writing the known things.

• Understanding the subjects in improper way due to impairment of intellect and at the same time, executing this improper knowledge in the wrong way is also termed as "Pradnyaparadh", which makes improper cognition of Manas, Indriyas with their objects and subjects.

बुद्ध्या विषमविज्ञानं विषमं च प्रवर्तनम्।

प्रज्ञापरार्धं जानीयान्मनसो गोचरं हि तत्॥ च.शा.१/१०९

C) Other Etiological factors : • Along with the Dhi, Dhriti, Smriti, Mana and Indriya, factors which govern the functioning of Mana and ultimately the functioning of acquisition of knowledge are the Doshas and Dhatus.

• They include Prana and Udana Vayu, Alochak and Sadhak Pitta, TarpakKapha, and Majja Dhatu.

• Ayurvedic classics have described almost all types of mental abnormalities under the heading of Unmada. In all types of Unmada there occurs derangement of eight factors which are responsible for the different manifestations of the disease (Cha.Ni.7/5).

उन्मादं पुनर्मनोबुद्धिसंज्ञाज्ञानस्मृतिभक्तिशीलचेष्टाचारविभ्रमं विद्यात्। च.नि.७/५

• According to Charak, Unmada is Vibhrama of Manas, Buddhi, Saudhya, Smriti, Bhakti, Sheela, Cheshta and Achara. Here Vibhramsha means perversion from the normal.

• As learning Disability is also a disorder of Manovaha Strotas, there is derangement of all these factors. It may not be at gross level like in

case of other Psychiatric disorders as Schizophrenia, Depression etc. but at a very particular area concerning Learning Process.

a) Vaat Dosha : • Grossly, the impairment in expressive skills which major form of Learning disability is mostly related with vitiation of Karmendriya and Udan Vayu. Since Vaak Pravrutti and Smriti are the normal functions of Udan Vayu, this factor is important in the phonological impairment and memory.

• The functions of Vyan Vayu, Karmendriya directly reflect the motor coordination. While the visual-spatial processing skills are mostly concerned with Dhriti, various motor coordination including eye-hand coordination require proper functioning of Prana Vayu, Netrendriya, Manas, Buddhi, Aatma, Karmendriya (Hasta), Udan Vayu, Vyan Vayu etc.

उरःकण्ठचरोबुद्धिहृदयेन्द्रियचित्तधृक्।

जीवनक्षयद्वार निःश्वासान्नप्रवेशकृत्॥ वा.सू.१२/४

उरः स्थानमुदानस्य नासनाभिगलांश्चरेत्।

वाक्प्रवृत्तिप्रयत्नोर्जाबलवर्णस्मृतिप्रियः॥ वा.सू.१२/५

व्यानो हृदिस्थितः कृत्स्नदेहचारी महाजवः।

गत्यपक्षेपणोत्क्षेपनिमेषोन्मेषादिकाः ॥

प्रायः सर्वा क्रियास्तस्मिन् प्रतिबद्धाः शरीरीणाम्। वा.सू.१२/६

• The process of discrimination and integration necessarily requires proper functioning of Buddhi (i.e. Dhi, Dhriti and Smriti). On the other hand the attention, concentration and all the cognitive processing skills require normal functioning of Sadhak Pitta. The verbal processing skills include fine functions of Udan Vayu.

b) Pitta Dosha : • The Pitta located in the Hrudaya is known as Sadhak Pitta. It attends to mental functions such as Knowledge, Intelligence and Self-Consciousness (Va.Su.12/13).

बुद्धिमेधा अभिमानाद्यैः अभिप्रेतार्थसाधनात्।

साधकं हृदयं पित्तम्॥ वा.सू.१२/१३

• Pitta when healthy and at its functional best provides Intellect, Discriminating power and governs the mental energy, creativity, beliefs and emotions, powers of analysis and discrimination and is responsible for motivation, self-confidence, feelings of fulfilment and spirituality. In simple words,

Sadhak Agni (Pitta) cooks and digests the thoughts and feelings. The healthy and strong Sadhak Agni have a quick response time, clear and good Atma and Buddhi connection that makes it easier to distinguish truth and reality from the information conveyed by the senses.

- Imbalance of Sadhak Pitta would cause many mental disturbances and Mood Disorders like Anxiety, Tension, Fear, Lack of Courage, Depression etc. Hence impairment in the Sadhak Pitta may affect the Intellect & Memory and hence the learning ability of the child.

- According to Sri Vaidya Ranjitrai Desai, author of “Ayurvediya Kriya Sharir” the adrenaline secreted by the Adrenal Medulla seems to be the Sadhak Pitta and this hormone though not secreted by heart can be considered as a substance relating to heart's action because of its influence in heart conditions like fear, panic, courage, anxiety, tension, excitement etc.

c) Kapha Dosha : ● The Prakrut Kapha Dosha i.e. the Sthir Guna of the Prakrut Kapha Dosha provides stability to the body as well as the mind (Va.Su.11/3).

श्लेष्मा स्थिरत्वस्निग्धत्वसन्धिबन्धक्षमादिभिः। वा.सू. ११/३

- Dyan Grahan Prakriya is done perfectly by a stable mind and Soul. Also the sub type of Kapha Dosha Tarpak Kapha which is said to reside in the Shiro Pradesh promotes long term memory (Va.Su.12/18).

शिरः संस्थो अक्षतर्पणात् तर्पकः। वा.सू. १२/१८

- While describing the Prakrutis, Charaka has quoted that the people belonging to Kapha Prakruti are Vidyavanta and Ojasvi (Cha.Vi.8/93) proving the role of Kapha Dosha in the process of learning. Also as the name “Tarpak” suggests it does Indriya Tarpan which in turn helps in the Dyan Grahan Prakriya. Any imbalance in the Kapha Dosha may lead to lack of concentration due to lack to stability, short term memory loss, hyperactivity and may surely hamper the process of learning in the child.

d) Majja Dhatu : ● The Vishuddha Majja Dhatu express itself in the form of Physical characteristics like Mruduanga, Balawant,

Snigdha Varna and Swara, Sthuladirghavrutta Sandhi and the person will be endowed with Dirghayushya, Balawant, Shruta, Vitta, Vidgyan, Apatya, Sanmam. This means they are respectable, knowledge full, highly intellectual and honoured by others (Cha.Vi.8/108).

मृद्वंगा बलवन्तः स्निग्धवर्णस्वराः पृथूलदीर्घवृत्तसन्धयश्च

मज्जसाराः। ते दीर्घायुषो बलवन्तः

श्रुतवित्तविज्ञानापत्यसंमानभाजश्च भवन्ति।। च.वि.८/१०८

- Intelligence is the main function of Majja Dhatu. As Pitta Dosha is responsible for these functions, it is said that there is a close relation between Pitta Dhara Kala and Majja Dhara Kala (Su.Ka.4/40 Dalhan).

एवं यैव पित्तधरा सैव मज्जधरेति षष्ठे

मज्जानमनुप्रविशतीत्यविरुद्धम्।। सु.क.४/४० डल्हण.

D) Pathogenesis of Learning Disability :

- As we have seen in Learning Disability, prime disorders are inability to read, write, calculate, that shows basic vitiation of Vata, hampering acquisition retention and display of knowledge even if intelligence is normal. But such a Vata Prakopa can't be inferred easily as the age of onset of the disorder is Kapha predominant Kala and the Nidana are also not clear. To present a disorder with Vatikakshana in Kapha Kala, the nidana should be strong and the supplementary factors like Strotodushti should be active.

- The basic Vitiation of Vata leads to the vitiation of Pitta and Kapha.

As it is a mental disorder the condition of Heena Satva is inevitable which makes a pre disposition in terms of Manovaha Strotodushti, the contributing factors for which are : Sahaj in terms of genetic loading, Garbhaja in terms of impairment of Satva, Bhavaj and Jataj with relation to dietary deficiencies or irregularities, Agantu causing Dhatu Vitiation and Karmaja as Idiopathic factors. The Prakupita Kapha further obstructs the channels of the Manovaha Strotas and Vatastrotas.

- The Manovaha Strotodushti result in the vitiation of Rajas and Tamas causing impairment in Dhriti. These vitiated Doshas (Shareerik and Manasik) get Sthansamshray in Manas, Hruday and Buddhi causing

impairment to Prana, Udana, Vyana Vayu, Sadhak and Alochaka Pitta and TarpakaKapha. The complex vitiation leads to Mano vibhrama, Buddhi vibhrama, Saudnya vibhrama and Smriti vibhrama. This vitiated state of Manas, Buddhi, Saudnya and Smriti leads to impaired skills of reading, writing and mathematics and the child becomes learning disabled.

- This shows an essential pathology leading to the manifestation of Learning Disability. While a difference in the facets of affliction with variation in intensity, where more of Bhakti, Sheela, Cheshta and Achara are affected will explain the co-morbid conditions like ADHD, ODD, Conduct Disorder etc.

E) Management of Learning Disability : As Learning Disability is not clearly mentioned in any Ayurvedic texts, no specific medicines are documented. But it can be approached with the general principles of treatment of Manas-roga, taking special precautions of specific disability, age of child, etio-pathogenesis, environmental factors etc. Broadly the treatment principle for learning disability can be classified as follows :

- 1) Nidanparivarjan (preventive measures).
- 2) Doshapratyanikchikitsa.
- 3) Vyadhipratyanikchikitsa.
- 4) Use of MedhyaRasayana - It means the drugs with the help of which one can attain the excellent Medha. The word Medha is used in various contexts meaning either Dhi or Dhriti. So these drugs can promote intellect, memory and the capacity to hold the knowledge. Some other drugs mentioned in different context, which also work as Medhya are like Brahmi, Shatavari, Vacha, Pippali, Jyotishmati etc.

Discussion And Conclusion - Ayurveda elaborates that depending upon different functions and different faculties, there are different types of intellects (Buddhi). So here we can say that there may be impairment in only that perceptual faculty or intellect which deals specifically with reading, writing or calculations. Similarly along with Buddhi bhramsha, Dhriti Bhramsha and Smriti Bhramsha further leads to in-attention and impaired memory. While describing Smriti

Bhramsha, Acharya Charaka quotes that Rajas and Tamas are the most important factors in the impairment of memory. If mind is covered by Rajas and Tamas, one cannot recollect the knowledge, he forgets all memorable things. Also due to Smriti Vibhramsha, the Buddhi of the person is not clear.

Ayurveda explains that any disturbance in the components of the links of the Dyana Prakriya will result in the false perception of knowledge or perverted knowledge. The main pathophysiological factors in this impairment are Dhi, Dhriti and Smriti. These factors and the process of perception or learning are correlated and inter-dependent.

The smooth functioning of Indriya, Mana, Atma and Buddhi is governed by the equilibrium between the Sharirik Bhavas i.e. Prakruta Dosha, Dhātu and Mala. Maintaining Pran Udan Vayu, Alochak-Sadhak Pitta, Tarpak Kapha, Majja-Shukra Dhātu in their balanced and purest form aids in the proper channelling of the Mana and Buddhi.

Doshas and Dhatus are nourished by one's Ahara and Vihara. So along with the Aushadhopchar, one should also consume Satvik Ahara and follow the Dinacharya and Rutucharya as suggested by the Acharyas which will ultimately help in eliminating all the possibilities leading to the occurrence of any Manasik Vikaras. Nidan Parivarjan, Dosha Pratyani Chikitsa, Vyadhi Pratyani Chikitsa, Adhyayan and use of Medhya Rasayandravys should be the treatment protocol in the management of learning disabilities.

To conclude,

- The Ayurvedic review of Learning Disability indicates that even if there is no evidence of any disorder named Learning Disability, we can establish a positive relation between the modern concept of Learning Disability and the Ayurvedic concept of acquisition of knowledge and the related Psychosomatic disorders.
- As there is no specific treatment for LD in Modern Science, the use of Medhya Dravyas alone can prove a helping hand in treating the learning disabilities in children.
- It is necessary to establish various

fundamental concepts in the area of learning process, Learning Disability and the treatment modalities.

• As the efficacy of the Medhya Dravyas is proved useful in the treatment of developmental disabilities in children, early detection and use of these Dravyas at an early age might prove helpful in solving the complexities faced by the children.

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प्रा. डॉ. श्रीहरी वैद्य ह्यांचे दुःखद निधन

सहकारनगर, पुणे भागातील प्रा. डॉ. श्रीहरी शं. वैद्य ह्यांचे दि. ६ ऑक्टोबर २०२० रोजी दुःखद निधन झाले. डॉ. वैद्य टिळक आयुर्वेद महाविद्यालयाचे माजी विद्यार्थी होते. ह्या महाविद्यालयातून त्यांनी बी.ए.एम.अँड.एस. तसेच पीएच.डी.चे शिक्षण पुरे केले. त्यानंतर टिळक आयुर्वेद महाविद्यालयात अनेक वर्षे रसशास्त्र विभागात अध्यापनाचे काम केले. ह्याचबरोबर पुण्यातील सहकारनगर भागात स्वतंत्र वैद्यकीय व्यवसाय यशस्वीपणे शेवटपर्यंत केला. त्यांच्या वैद्यकीय व्यवसायातील यशस्वी कारकिर्दीत त्यांना अनेक पुरस्कार लाभले. अगदी अलीकडेच त्यांना महर्षी आबासाहेब पटवर्धन संशोधन संस्थेचा सन्मान लाभला होता. राष्ट्रीय शिक्षण मंडळाचे ते सभासद होते. त्या माध्यमातून संस्थेच्या प्रगतीसाठी मोलाचे योगदान दिले.

राष्ट्रीय शिक्षण मंडळ, टिळक आयुर्वेद महाविद्यालय, आयुर्विद्या मासिक समितीच्या वतीने दिवंगत डॉ. वैद्य ह्यांना सश्रद्ध भावांजली.

श्रद्धांजली!





Critical Review Of Vertigo

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Definition : It is a feeling in which the external world seems to revolve around the individual or in which the individual itself seems to revolve in space. It is not a disease, but a symptom.

Maintenance Of Balance (Physiology) : CNS collects information about static / dynamic position of the body in relation to the ground and the surroundings from certain sensors in different parts of the body. Information from different sensors integrated in the brain and compared with previously stored experiences. A very precise, coordinated and accurately timed motor output generated reflex which contracts some specified muscles and restores balance. (See Table 1)

Subject gets sensation of Vertigo / Imbalance :
If there is.....

- Defect in the Eyes / Vest. Labyrinth / Proprioceptors.
- Mismatch between the information obtained from these 3 sources.
- C N S fails to integrate the afferent information from these 3 sources.
- C N S fails to generate the motor output.

- Defect in the motor output system, i.e. in the nerves and muscles of the eyes / limbs / trunk / neck

Peripheral Vestibular Disorders :

- Vestibular Neuritis
- Labyrinthitis
- Meniere's
- Acoustic Neuroma
- Fistula Cholesteatoma / Surgical
- Benign Paroxysmal Positional Vertigo (BPPV)
- Vestibulotoxic drugs

Central Vestibular Disorders :

- Vascular Hypotension, Vertebro-basilar artery insufficiency, Anemia, Migraine, Stroke.
- Epilepsy Endocrine disorders- DM, Hypothyroidism.
- Road traffic accident Head trauma.
- Tumor of brain stem 4th ventricle Cerebellum.
- Infections- Meningitis, Encephalitis's.
- Glial disease - Multiple sclerosis, Gastritis.
- Others - Ocular disease, Parkinsonism Psychogenic. (See Table 2)

(Table 1)

Physiology of Balance

- Afferent SENSORY system (Inputs to the balance system)
- Vestibular labyrinths
- Eyes
- Proprioceptors

- Efferent MOTOR system (output generated by the brain)
- Directed to -
- Muscles of LIMBS / TRUNK / NECK through VESTIBULOSPINAL system.
- Muscles of the EYES through VESTIBULO-OCULAR system.

Cerebellum tunes finely the motor output Cognitive system determines the nature of response

(Table 2)

Peripheral and Central Vertigo		
	Peripheral	Central
Onset	Sudden	Usually Slow
Severity of vertigo	Intense	Usually mild
Pattern	Paroxysmal	Constant
Exaggeration by movement	Yes	Variable
Laterality	Unilateral	Uni/Bilateral
Auditory Symptoms	Yes	No
TM	May be abnormal	Normal
CNS Symptoms	Absent	Present

History taking :

- Nature of complaints
 - turning / rotating / instability / blackouts
- Change of Head Posture (BPPV).
- Suddenly Sitting up (Orthostatic Hypotension).
- Rapid Head movement (defective VOR).
- Only while walking (Parkinsonism).
- Emotional factor (Psychogenic vertigo).
- Coughing/Sneezing/Lifting Weights (Perilymph Fistula).
- Unprovoked Sudden Attacks Of vertigo (Migraine).
- Mode of onset.
 - sudden / gradual.
- Progress.
 - downhill / improving / episodic.
- Aural symptoms.
- Deafness / tinnitus / fullness.
- CNS symptoms.
 - Headache / diplopia / motor-sensory disturbance.
- Precipitating factors.
- Duration of symptoms.
 - moments / minutes / hours / days / months

Analyzing precipitating factors :

- Change of Head Posture (BPPV).
- Suddenly Sitting up (Orthostatic Hypotension).
- Rapid Head movement (defective VOR).
- Only while walking (Parkinsonism).
- Emotional factor (Psychogenic vertigo).
- Coughing/Sneezing/Lifting Weights

(Perilymph Fistula).

- Unprovoked Sudden Attacks Of vertigo (Migraine).

Analyzing DURATION of Symptoms :

- Momentary (Severe unilateral vestibular failure).
- Seconds (5-90 seconds in BPPV).
- Minutes (2-20 minutes in TIA of posterior circulation, perilymph fistula).
- Hours (more than 20 minutes but less than 12hrs –Meniere’s disease).
- Days (2-7 days in vestibular neuronitis).
- Weeks (CNS lesions, psychogenic vertigo).

Vestibular Function Test :

- Spontaneous Nystagmus Test.
- Gaze Nystagmus Test.
- Dix Hall pike Test (Positional Nystagmus) Rotat.
- Fistula Test.
- Caloric Test.
- Romberg Test.
- Finger Nose Pointing Test.
- Head Shaking Nystagmus test.
- Head Impulse Test.
- Rotatory Chair Test.
- ENG (Electro Nystagmography).
- VNG (Video Nystagmography).

Vestibular-Ocular Reflex (VOR)

- Causes eyes to move in the opposite direction to head movement.
- Speed of the eye movement equals that of the head movement.
- Allows objects to remain in focus during

head movements.

- Vestibular labyrinth exerts a tonic contraction of the eye/body muscles by virtue of which eyes stay in the midline and body maintains erect posture.
- In vestibular derangement eyes move away from the midline which leads to abnormal eye movement and the subject tends to fall to one side.

Nystagmus :

- Involuntary rhythmical oscillation of eyes away from the direction of gaze, followed by return of eyes to their original position.
- The direction of the fast component determines the direction of the nystagmus.
- i.e If Nystagmus is to the Right ,the lesion is on the Left.
- Nystagmus based on direction :
 - 1) Rotatory /Torsional
 - 2) Horizontal
 - 3) Vertical

Positional Nystagmus :

- Hallpike Manoeuvre.
- Patient sits on bed, head turned 45 degrees to left or right.
- Patient is rapidly laid back with head over edge of bed 30 degrees below the horizontal. Eyes open look for nystagmus.
- After 30 sec return patient to upright position.
- Repeat with head to other side.

Spontaneous Nystagmus Test :

- The clinician just has to ask the patient to look at the clinician's index finger placed about 18-20 inches in front of the patient's nose while the clinician looks at the patient's eyes. If it is a horizontal nystagmus, it will either be a left beating or a right beating nystagmus.
- A left beating nystagmus suggests possibility of a right peripheral vestibular lesion and a right beating nystagmus suggests possibility of a left peripheral vestibular lesion.

Treatment of Vertigo as per cause :

- 85% of the vertigo are of peripheral origin,

rest 15% central.

- BPPV - Epley's manoeuvre or by semont's manoeuvre.
- Meniere's - Diuretics.
- Vestibular Neuritis - Anti-inflammatory agents like steroids, anti-vertigo drugs to tackle intense vertigo and sometimes by Anti-viral.
- Labyrinthitis - Antibiotics and Anti-inflammatory agents.
- Migraine - Migraine prophylactic drugs.
- Psychogenic Vertigo and Phobic Postural Vertigo by Psychotropic drugs.

Antivertigo Drugs :

Prochloroperazine 5 To 25 Mg Tds. (Stemetil, Emidoxyn) - Very effective for symptomatic relief. Acts on the muscarinic (M1) receptors and blocks dopamine receptors in the brain. CNS depressant. Significant side effects e.g. extrapyramidal reactions, hypotension, and anticholinergic effects. Best used for a very short course to relieve acute symptoms.

Cinnarizine 25 To 75mg Tds. - Labyrinthine sedative effect. It increases Cerebral and Inner ear blood flow by its Anti-vasoconstrictive effect, Reduces blood viscosity, Stabilizes vascular endothelium. Side effect- Drowsiness and its prolonged use can cause Pedal oedema and Extra pyramidal symptoms. It is an Anti-Cholinergic Drug and is CNS depressant. Reasonably safe drug.

Betahistine - 8 To 16 Mg Tds. - H1 - antagonist and H3 antagonist. Improves cerebral blood flow. Increases inner ear blood flow. It is the only non-sedative anti vertigo drug and this is a very major advantage. It does not depress CNS rather some studies have shown that it causes an arousal effect which is beneficial in the development of the vestibular compensatory mechanism. It has special roll in Meniere's disease. Side effect- It can sometimes cause gastritis and Potentiate Asthma in Asthmatic subjects.

Meclizine 25 Mg Tds. - It diminishes excitability of neurons in vestibular nucleus. CNS depressant, likely to depress Vest. Comp mechanism. Less pronounced anticholinergic

(Table 3)

CNSDepressant Drugs	VASODILATOR Drugs increasing blood flow to inner ear and brain	Anticholinergic drugs	Side effects like Extrapyramidal reaction
Prochlorperazine	Cinnarizine	Dimenhydrate	Prochlorperazine
Dimenhydrinate	Betahistine	Prochloro-perzine	Cinnarizine
Meclizine	Ginkobiloba		
Cinnarizine			
Dizepam			

activity hence less side effects. Does not increase Cerebral / Inner ear blood flow. More suited for control of motion - sickness than acute vertigo.

Dimenhydrinate 50 Mg Tds. - Very effective in acute vertigo and at the same time significantly reduces the symptoms. Like nausea, vomiting, sweating etc. that usually accompanies acute vertigo. It does not have any extrapyramidal side effects. Being an anticholinergic drug, CNS depressant it should be restricted to maximum 7 days.

Diazepam 2 To 5 Mg Tds. - Tranquilising and anxiolytic effects. Decreases resting activity of vestibular nuclei neurons. Acts upon the reticular formation and limbic systems in the brain. Dramatic effects in psychogenic vertigo. CNS depressant - hence best avoided.

Ginkgo Biloba - Improves health of endothelium in blood vessels and hence increases transport through blood brain barrier. Improves arterial / venous tone in hypoxic. Decreases platelet agglutination. It is a good Antioxidant and is known to increase the blood supply to the brain and inner ear. It does not have any Antivertigo effect or any symptom relieving effect on patients of acute vertigo.

Observation : The above-mentioned drugs are all used for the treatment of vertigo. The mode of action, and side effects and duration of treatment is observed as per the table no. 3 -

Conclusion : It is seen that some drugs act on CNS and some on Labyrinthine in treating Vertigo i.e. Drugs act centrally and

peripherally.

The Treatment for Vertigo :

Specific : If there is specific cause, it should be treated.

General : Treatment is same as the treatment for menieres disease.

Vasodilators are contraindicated for giddiness after head injury and myocardial infarction.

Treatment of Menieres Disease : Reassurance, labyrinthine sedatives like prochlorperazine dimenhydrinate, Vasodilators like cinnarizine, betahistine, nicotinic acid.

Vitamins like B1, B6 and B12 but role is not established.

Diuretics to reduce tension of endolymph.

Tranquilliser and antidepressants for anxiety and functional overlay.

Labyrinthine exercise is helpful in regaining confidence.

Assurance : The patient should be assured that giddiness is not dangerous, but has an nuisance value.

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Case Presentation

Vasico vaginal Fistula - A Review Case

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Introduction : Vasico vaginal Fistula is a subtype of female fistula. Vasico vaginal fistula is an abnormal opening between the two organs that is bladder and Vagina. That result in continuous and unremitting urinary incontinence.

It is divided in following types **simple fistula** - small in size with single non radiated fistula. Size below 2.5 cm. **Complex fistula**- it is large in size (above 2.5 cm) and which are previously failed fistula repair. Sometimes intermediate size fistula consider many Authors of size 0.5- 2.5cm.

Vasico vaginal fistula can also result from Rape, Hysterectomy, Cancer operation, cone biopsy, Radiation therapy. In this case study it is presented a rare case of Vasico vaginal fistula after Hysterectomy.

Aim : Study of the Surgical Management of Vasico vaginal Fistula.

Objectives : To Describe a case presentation of Vasico vaginal Fistula.

Material and Method : Name- xyz Age- 47 yr Sex- female.

Religion- Hindu Occupation- Housewife

Main Complaints and Duration - Continuously Urine passes through Vagina since 4 weeks.

Intermittent fever. Lower Abdominal pain since 5 days. Nausea present since 5 days. Vomiting Occasionally. Weight loss (about 2-3 kg)

Past History- Obst. H/O- Regular menses before 1 ½ yrs, then irregular. Menarche of 15 years.

S/H/O- 1) LSCS done. 1st 24 yr ago male. 2nd 20 yr ago Female. 2) Abdominal Hysterectomy before 5 weeks.

M/H/O- no any medical history

K/C /O- no known case of DM/ HTN/ Asthma

/Koch's

Family History - No any Family History.

Physical Examination - GC fare and afebrile

Pulse - 72 /min **BP**- 120 /80 mm of Hg

CVS - S1 -S2 Normal **CNS**- concious Oriented RS AEBE clear and Normal.

P/A Tenderness at lower abdomen.

Bowel -Passed Micturition- pervaginally passing.

General Examination - Pallor present, No Icterus, No regional Lymphadenopathy

Local Examination -Tenderness at Hypogastric region. Per vaginally discharge present. And soaking of cloths .

Investigation - **Hb**- 8 gm/dl, **WBC**- 11000 /cumm, D/C - N - 70 %, L - 25%, E - 2%, M - 2%, B - 1%, BSL (R)- 120 mg/dl, BUL- 30mg %, sr.creat- 0.9 mg %, Urine pus cell-10-12 p

ECG , **chest x-ray** - normal, **HIV** - Negative **HbsAg** -Negative.

Leak Test - patient Catheterised with Foley's catheter no 16 and tried to full it with Methylene Blue stained NS leak of Methylene Blue stain fluid NS pervaginally seen.

USG (Abd and pelvis) - Post Hysterectomy Status vault inflammation was seen. Rest of the abdomen normal. Urinary bladder found empty (Collapse)

IVP Study- Normal dye excretion on both kidney and entire length of Ureters. On bladder excretion study film the strike of leak seen. Diagnostic Cystoscopy done which showed rent in urinary bladder of near 1 cm X 1 cm in size.

Treatment and Management :

Conservative Treatment - After diagnosis of Vasico vaginal Fistula Conservative treatment started. First of all patient was Catheterised to stop or to avoid Par vaginally urine leak. Inj. Monocef 1gm iv BD, inj. Amikacin 500mg iv

BD, inj Pan 40 mg iv OD and iv fluids starts. iv antibiotics were continued for 1 week Then orally antibiotics Tab. Clavam 625 mg 1 BD, Tab. Pan 40 mg 1 OD, Tab. Meftal spas 1BD, Syp. Cital 2tsf TDS were given.

H/O - 2 PCV given to correct drop in Hb% Post op hysterectomy period trial with catheter given for 2 weeks and kept under observations on urine leak pervaginally, but at the end of 2 weeks and after completion of 6 weeks post. Hysterctomy status patient had persistent leak. So planned for surgery i.e. **Vasicovaginal Fistula Repair by Open Surgery.**

Surgical Procedure - Anaesthesia - Spinal with epidural Anaesthesia. Under all aseptic precautions, painting drepping done. Position-lithotomy.

Vaginal packing was done with betadine soaked sponges and bladder filled with Normal saline. To avoid the bladder injury. Abdomen was opened by **lower midline incision** as urinary bladder filled with NS peritoneum reflection reflected to expose the urinary bladder extraperitonealy. Bladder confirmation done by aspiration. Two stay sutures are taken with full thickness of bladder and bladder opened vertically in midline. Suction done. Search made to find out rent or injury to bladder tissue. The posterior bladder wall found oedematous and found rent of width of 1x1 cm approximate size. The Ureteric opening identified and normal on both sides. The inflamed and partly avascular necrotic edges of the wound excised. Margin freshened with good avascularity confirmation. The posterior urinary bladder wall closure done in two layers with vicryl 2-0. Haemostasis achieved and confirmed. Same time pervaginally bladder wall repair done with vicryl 2-0 to give strength to bladder wall. Bladder irrigation done with NS and Sucked. Anterior urinary bladder wall repair was done with vicryl 2-0 in two layers. Retropubic abdominal drain no - 18 kept and fixed. Abdomen was closed layer

wise with prolene 1no and skin was closed with Stappler.

Follow Up - Watch was kept on pervaginally urine leak in first 24 hrs 2 surgical sponges soaked. Next 24 hrs 1 Sponge soaked then after soakage/leak stopped. First 48 hrs slightly tinch in urine seen. Manage by iv sylate 250 mg BD for 3 days and urine colour turned to normal. Retropubic drain reduced from 200 ml to nil in 72 hrs. As per pre op culture and sensitive report inj. Supacef 1.5 gm iv BD, inj. Amikacin 500 mg iv BD, inj. Pan 40 mg iv OD continued for 5 days. Fluids stopped after 48 hrs and orally shifted gradually.

Retropubic drain was removed after 72hrs. The transurethral Foley's catheter kept for 14 days and observed for haematuria and clot retention. Her post op recovery course was normal. Foley's catheter removed after 14 days after Confirmation of holding and no Pervaginal leak. Patient shifted on Oral and According to culture and Sensitivity Report-Tab- Ceftum 500mg 1 BD, Tab- Pan 40 mg 1OD, Syp.Cital 2 tsf TDS started. Followup kept for 4 weeks.

Discussion - Urinary bladder injury resulted in Pervaginal urine leak continuously. It was labelled as Vasicovaginal fistula few cases recover with conservative management by doing Catheterisation and waiting for 6 weeks and some times rent in bladder wall heals and leakage stop. But in particular case patient presented delayed leak so tried to treat conservative but Rent (leak) not healed and leakage not stopped so it may be thermal (cautery) injury and required Surgical Treatment.

Conclusion - This case study Vasicovaginal fistula was operated successfully without any complications.

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(आहारजिज्ञासा : आहार विषयाचा जागतिक व आयुर्वेदाच्या माध्यमातून वेध घेणारे सदर)

Animal Meat Global food : Part III

Dr. A. B. Limaye, B. A. M. And S., F. F. A. M. (Anaesthesia), L. C. P. & S.

Ahar-Vargas are described in Anna Swarup Vijnan (c.su.27 s.su.46.A.H.SU.6) In

Brihatrayee

In Mamsa Varga the animals, birds, Amphibians, reptiles, aquatic animals and birds are described in details, with the properties of their meat

According to their habitat, desha and eating habits they are classified in eight categories.

A) Jangal Desha -

1) **Mriga** : Different species of deer are impala, musk deer, Chital, Sambhar, Gazelle

2) **Vishkar** : These are Gallinaceous birds. They are heavy bodied birds usually they do not fly. They disperse the food by their legs before eating even they scatter the grains while eating. Quail, Rooster, chicken, Turkey, Peacock, common quail (Lavabird) Partridge (Titter).

3) **Pratud Birds** : These are called pecker birds. These birds, first strike at the food and then eat it. Pigeon, Parrot, Kokila, (cuckoo), Mynah, Sparrow, Valguli- (a kind of Bat) Bulbul.

B) Anup Desha -

Mahamriga : Elephant, Rhinoceros, Swine, Buffalo, Bison, Antelope.

5) **Jalachar Birds** : Swan, Heron, Hawk, Duck, Flemingo, Pelican, waterfowl, Goose.

6) **Jalachar Animals** : Crocodile, CRAB, Turtle, Oyster, Fish Tortoise.

C) Sadharan Desha-

7) **Bileshaya Animals** living in the burrows on the earth mouse, Mongoose, Iguana, Asagar, Frog, Snake.

8) **Prasaha** : Animals and Birds who eat by snatching, catch the prey in the mouth and teeth

tear it. **Animals** : Lion, Horse, cow, camel, dog, Ass, Tiger, cat. **Birds** : Crow, Vulture, Hawk, owl, Golden Eagle.

It is astonishing when we find two important animals Goat and Sheep are missing in the entire Classification why Ayurvedic legends did not include them in any specific category?

The Answer is given in Astanga Samgraha Sutrasthan.

योनिष्वजावीर्यामिश्रगोचरत्वादिनिश्चिते A.S.S. 85

The Goat and Sheep are not mentioned in the eight categories, as they are uncertain regarding its hereditary and also its spread over in every area.

Domestication of Goat started 10,000 year back. Goat and Sheep were able to adapt to the Jangal Desha and Anup Desha climate, today also we see goat and sheep farming in all over India.

Though different states have different climate. There are ten popular Indian Goat breeds for meat and milk production.

छागमेषवृषाश्वाद्या ग्राम्याः प्रोक्ता महर्षिभिः। Yogaratanakar

This quote of yogaratanakar says goat and Sheep are Gramya i.e. domesticated.

If we compare the meat of three deshas Jangalesha meat is the best.

तत्र बद्धमला रुच्या मांसानामुत्तमा हिमाः

कषायस्वादुविशदा लघवो जंगला हिताः। A.S.S.

Jangala mamsa is very tasty. It has sheet virya. Vishada guna is capable to clear all srotas and microchannels. As we know comparatively it is laghu for digestion. Mamsa does not contain Fibre, its consumption leads to constipation. Gender wise male bird's and female animal's mamsa is laghu. Pregnant female's mamsa is Guru.

Animal meat is a muscle tissue in which pigmented "MYOGLOBIN" is present. The myoglobin is an iron and oxygen binding protein found in the muscle tissue of vertebrates in general, and in almost all mammals. It is distantly related to human haemoglobin.

The myoglobin stores oxygen in muscle cells. The muscle cells of animals use oxygen to extract the energy needed for constant activity like walking, running etc.

Modern science has classified animal meat into two categories - 1) Red meat 2) White meat

The deciding factor is myoglobin concentration, which imparts the colour to the meat. Higher the concentration darker is the meat.

Myoglobin concentration varies according to species in mammal. In Pork it is 2mg/g having Pink colour, Goat it is 6mg/g having light red colour. In Beef it 8mg/g exhibiting cherry red colour.

Big animals like Buffalo have more myoglobin concentration, small Rabbit has low myoglobin concentration.

If animals is castrated the myoglobin concentration decreases.

A) Red meat : Mammals Horse, Pig, cow, Buffalo, Dog, cat, Camel, Rabbit, Bat, Goat, sheep, Deer, Reindeer, Yak, Kangaroo. Large flightless birds - Emu, Ostrich.

B) White meat : a) Poultry chicken, Turkey, Duck. b) Fishes of different varieties.

C) Snakes : Edible snakes- Rattlesnake, Coral snake, Copperhead.
The cottonmouth snake.

Across the world in all countries animal meat, eggs and milk are in use daily as a staple food.

In any country cultural background, Religious belief local laws regarding wild life protection and regional availability are the deciding factors for the selection of animals for consumption as a meat.

Red meat is made up of muscles with fibers that are called slow twitch. These muscles are used by animals for extended periods of activity such as standing or walking.

The consistent energy source is the stored oxygen in the myoglobin. Diving mammals such as seals and whales are able to remain submerged in water for long period because they have greater amount of myoglobin in their

muscles

When we cook Red meat above 140^oF myoglobin loses its ability to bind oxygen and the colour changing process in the meat starts

White meat is made up of muscles with fibers that are called fast twitch. These muscles are used by the animals for quick burst of activity such as fleeing from danger.

These muscles get energy from the glycogen, which is also stored in the muscles.

Raw white meat has translucent quality when we cook it, the proteins denature and recombine or coagulate and the meat becomes opaque and white.

The interlacing of fat in the muscle is known as the marbling of meat. Marbling affects the flavour and tenderness of a meat and definitely the well marbled meat, cooks to a texture, where it is moist and juicy. The surface fat on a particular cut of meat protects cut from drying out during roasting and helps to protect juiciness.

In any animal muscle tissue is divided into skeletal, cardiac and smooth muscle i.e. visceral muscle.

It is the skeletal muscles that are of the greatest concern to "chefs". The inner thinner smaller muscle fibers are tender. The muscles in the back are for support and these muscles move less during locomotion hence they are tender, compare to shoulder and legs of its animal.

In Ayurveda also regionwise the mamsa is Guru or laghu is described. The tender parts of the animal are high in demand for cooking.

Now let us discuss properties of animal meat (Mamsa) from Ayurvedic angle.

शरीरबृंहणे नान्यत् खाद्यं मांसात् विशिष्यते। C.S. 27

मांसं बृंहणीयानाम च। S. 25

बृहत्त्वं यत्त्वशरीरस्य जनयेद् तत्तच्च बृहणम्। C.S. 2/29

तस्मै हितं बृंहणीयम् बृहणं मांसवर्धनम्। C.S. 22/9

बृहणं पृथिवीअम्बुगुणभूयिष्ठम्। Sushrut, S.41

गुरुशीतं मृदुस्निग्धं बहलस्थूलच्छिलम्

प्रायो मन्दं स्थिरं श्लक्ष्णं, द्रव्यं बृहणं उच्यते। C.S. 22/13

Brimhan means nourishment of seven dhatus of the body in general, but at the same time mamsadhatu vardhan is a specific action, inherited by the Brihmahan drya, Body mass and weight increases.

Charakokta plant based "Brimhaniya Gana" is described in Samhita, but considering the therapeutic value of animal meat charak quoted

no other food excels animal meat in producing brimhan effect on human body. It is supreme brimhan!

If we study the Gunas of animal meat they all are kaphavardhak. The kapha dominant constitution person should consume meat with caution while vata dominant constitution person can consume it freely.

The important “Guru Guna” is related to everyday digestion of food. The eternal law of Ayurveda regarding Gurugana is as follows

गुरुणामर्धसोहित्यं लघुनां नातिवृत्तता।

मात्राप्रमाणं निर्दिष्टं सुखं यावद्विजयीति॥ A.H. su 8:2

Gurufood Veg or Non veg should not be consumed further on feeling of half fullness of stomach or Gurufood should be taken in such way that one still feels hungry. However laghu food may be consumed to the satisfaction.

If you over indulge in non veg food, your biological fire will not be able to digest the meat, the end product will be “Ama”

There are seasonal changes in the agnibala, while consuming animal meat you have to adopt to it. In a chart I have explained it.

In charak Samhita in Vimansthan, “Chakrapanidatta” has explained in detail regarding your daily meal He quotes animal meat should be “two Pala” i.e. eighty grams.

In united kingdom in 21st century to avoid life

style diseases and cancer, the scientist are advising Seventy grams of animal meat per day. Or two thousand one hundred gram of it per month.

अनात्मवन्तः पशुवद् भुजते ये अप्रमाणतः।

रोगानीकस्य ते मूलम् ...॥ Sushrut

If you do not respect the agnibala and over indulgence in food you are bound to get Santarpanotha Vaydhi.

The function of mamsa dhatu is to provide the cover to the body, to give shape and strength to the body and ability to perform movements. When mamsa dhatu is in an excellent state, it is called mamsa sara. Person with this sara is physically strong with well developed muscles and also endowed with qualities such as forgiveness charitable nature without greed, good health wealth and long life.

Animal meat – Global food (See Chart 1)

क्षीणाः क्षताः कृशा वृद्धा दुर्बला नित्यमध्वगाः।

स्त्रीमद्यनित्या ग्रीष्मे च बृंहणीया नराः स्मृताः॥ च.सू. २२ c.u.22

Everyday Strainous walking, emaciated, debilitated, old and lean individuals need brimhan. Those who overindulge everyday in sex and alcohol need brimhan. In Grishma Ritu one should do brimhan.

Vagbhat has added pregnant mothers, lactating mothers, and growing children to this list. Over Indulgence is sex given rise to shukra

Chart 1 showing Seasonal changes in animal meat.

Ritu	Tridosha	Mamsa and mamsa rasa indicated.
Varsha	Vata prakopa Agni Mandya Hinbala Bala lowest -	Jangala mamsa mamsa Rasa - Spices to be used , Garlic, Ginger Pepper. For cooking Sesamum oil, Ghee Avoid Fish eating strictly.
Shrad	Pitta prakop Bala Madhyam	Jangala mamsa. Spices to be used - onion, ginger, dhane, Jire, corinander cardamom. For cooking Ghee, coconut oil Saf flower oil contra indicated
Hemant	Jalharagipradeept Bala utam.	Jangal, Anup and Sadharan all three categories animal meat, fish and eggs you can enjoy non veg food. Oils for cooking mustard seed oil, sesamum oil and Ghee. Spices to be used garlic pepper ginger mint.
Shishir	Jalharagin pradeept Bala utam	As described in Hemant Ritu.
Vasant	Accumalatd Kapha liquifies, Agni subdud Bala Madhayam	Jangal mamsa, Dry mutton dishes Meat roasted in fire spices Hing, Pepper, Ginger, Garlic give preference to oils than ghee.
Grishma	Vata Sanchaya, Hinbala,	Lobster, chicken Charakacharya has advised brimhan by giving non veg diet and mamsa rasa. Spices - Onion, Dhane, Jire, Coconut. Oil for cooking - Groundnut oil, Ghee

dhatu kshya.

Mamsa being vrishaya it is shkura verdhak. With every coitus there is ejaculation of semen. If your study the analysis of semen male loses, proteins and zinc mineral. Per coitus there is loss of 3 to 5mg of Zn. Our daily requirement is 12-15 mg of Zn. Zinc being most important micromineral, two hundred biochemical reaction are Zn dependant Even synthesis of proteins for us everyday is Zn dependent Over indulgence in both leads to malnutrition. Animal meat fish and eggs are rich in Zn and proteins.

प्रीणनः सर्वभूतानां हृद्यो मांसरसः परम्।

शुष्यतां व्याधिमुक्तानां कृशानां क्षीणरेतसाम्।

बलवर्णार्थिनां चैव रस विद्याद्यथाऽमृतम्। C.S. 27

We know to nourish body and acquire strength animal meat is ultimate, but mutton soup (Mamsarasa) does the same function. You enjoy warm mutton soup while sipping, it helps to recover fast convalescing patients.

It boosts the shukra dhatu and your complexion starts glowing.

In 'AGRYA SANGRAHA' Adhya animal meat is rated top as BRIMHANA and chicken meat is rated top most as Balya.

Animal meat of all eight categories possess

basic Brimhan quality.

Balya drya gives strength to the body. Charak has described plant based "Balya Gana", but top most as a Balya is chicken meat.

This shows the crystal clear mind of the legend while classifying the dryas.

धर्मार्थकाममोक्षाणामारोग्यं मूलमुक्तम्। c.su.1:15

Health is very important as it is the basis of all the four objectives of human pursuits namely a Dharma (duty) Artha (material wealth), Kama (personal pleasures) and Moksha (Ultimate deliverance).

In human life to achieve the goal " Moksha " Ayurveda advises meditations, yoga. Sadvritta and Satwik ahar.

The animal meat, poultry, fish, eggs, onion and Garlic are tamasic food ingredients. In Sadvritta "Himhsa" is unethical conduct, slaughtering the animal is Himhsa.

The animal meat with therapeutic value is not useful to achieve Moksha. In all vrats and "Chaturmas" we abstain from meat fish and eggs, but animal milk, butter milk, butter and ghee being satwik we consume them during Vrats.

(To be continued)



Ahinsa Week - A Report

Dr. Aishwarya M. Ranade, NSS Program officer, Tilak Ayurved Mahavidyalaya, Pune.

National service Scheme unit of Tilak Ayurved Mahavidyalaya, Pune celebrated Ahinsa week in co-memmoration Mahatma Gandhi on his birth anniversary on 2.10.2020.

• **Ahinsashapath** - Principal Dr. Sadanand Deshpande, vice Principal Dr. Saroj Patil. Dr. Mihir Hajarnavis, NSS program officers, all teachers and non-teaching staff of college took Ahinsashapath (oath for non-violence) on

3.10.2020. Oath was given to NSS volunteers through online Goggle meet app.

• **Khadi day** - on 3.10.2020 promotion and awareness on khadi wearing was done by wearing Khadi clothing. All teachers actively responded to this activity. NSS volunteers prepared e-posters and posted them on social media wall to propagate Khadi wearing.



Team NSS of Tilak Ayurved Mahavidyalaya taking oath for non-violence





सुरक्षित गर्भपात (SAFE ABORTION)

डॉ. सौ. निर्मला राजेश खैराटे, B.A.M.S. वैद्यकिय अधिकारी,
पद्मावती क्लिनिक, फॅमिली प्लॅनिंग असोसिएशन ऑफ इंडिया, सोलापूर शाखा, सोलापूर, महाराष्ट्र.

गर्भपात हा विषयच नाजूक आहे. फक्त गर्भपात हा शब्द ऐकला तरी सर्वांच्या नजरा उंचावतात. महिलेकडे बघण्याचा दृष्टीकोन बदलतो. 'सुरक्षित गर्भपात' या शब्दातच महिलेच्या आरोग्याच्या सुरक्षेची काळजी घेऊन केलेला गर्भपात असा अर्थ अभिप्रेत आहे. भारतात १९७१ साली 'सुरक्षित गर्भपात कायदा' (MTP ACT) लागू झाला. २८ सप्टेंबर हा दिवस 'जागतिक सुरक्षित गर्भपात' म्हणून साजरा केला जातो.

गर्भपाताच्या दोन पद्धति आहेत.

१) वैद्यकिय गर्भपात (MMA - MEDICA METHOD OF ABORTION) यामध्ये सात आठवड्यापर्यंतच्या गर्भाचा गर्भपात गोळ्यांद्वारे केला जातो.

२) सर्जिकल गर्भपात - यामध्ये ७ आठवड्यावरील व १२ आठवड्यापर्यंतच्या गर्भाचा गर्भपात एका रजिस्टर्ड वैद्यकिय अधिकाऱ्याच्या निगराणीखाली केला जातो. ५ ते १० मिनिटांच्या या प्रक्रियेत गर्भाला व्हॅक्यूम सक्शनद्वारे गर्भाशयापासून विलग केले जाते. (MVA - MEDICAL VACCUME ASPIRATION)

कायद्या अंतर्गत २० आठवड्यापर्यंतचा गर्भपात करण्याचा अधिकार महिलेला आहे ही सुविधा शासकीय रुग्णालयात तसेच काही खाजगी रुग्णालयात उपलब्ध असते. वीस आठवड्यापर्यंतच्या गर्भपातासाठी दोन वैद्यकीय अधिकाऱ्यांच्या निगराणीची गरज असते. तसेच त्या दोन रजिस्टर्ड वैद्यकिय अधिकाऱ्यांचे प्रमाणपत्र त्या महिलेकडे असणे कायद्याने बंधनकारक आहे.

आता आपण गर्भपात कोणती महिला करून घेऊ शकते हे जाणून घेऊया :-

- १) एखाद्या गर्भवती महिलेच्या जीवाला धोका असेल तर.
- २) गर्भवती महिलेच्या मानसिक किंवा शारीरिक आरोग्याला धोका पोहोचणार असेल तर.
- ३) वैद्यकीय चाचणीत जन्माला येणाऱ्या बाळात व्यंग असेल तर.
- ४) एखाद्या महिलेला बलात्कारातून गर्भधारणा झाली असेल तर.
- ५) विवाहित महिलांच्या बाबतीत संतती नियमनांच्या साधनांचा वापर असफल झाला असेल तर आणि त्या

जोडप्याला तो गर्भ नको असेल तर.

अंध, अपंग, अल्पवयीन, विधवा यांच्यावर अत्याचार होऊन जर गर्भधारणा झाली, आणि त्यांना तो गर्भ नको असेल तर कायदानुसार गर्भपात करून घेण्याचा त्यांना पूर्ण अधिकार आहे. गर्भपात कायदानुसार (MTP ACT) नुसार जर अल्पवयीन १८ वर्षाच्या आतील महिलेला गर्भधारणा झाली तर पालकांच्या संमतीने ती गर्भपात करून घेऊ शकते. जर महिला १८ वर्षाच्या वरील असेल आणि असलेला गर्भ तिला नको असेल तर तिच्या स्वतःच्या संमतीने गर्भपात करून घेण्याचा तिला अधिकार आहे. बरेचदा गर्भलिंग निदान करून गर्भपात केला जातो असा गैरसमज असतो परंतु वैद्यकीय गर्भपात कायदा (MTP ACT) व गर्भलिंगनिदान कायदा (PCPNDT ACT) हे दोन्ही वेगळे आहेत. MTP ACT मध्ये गरज असताना गर्भपात केला जातो तर PCPNDT ACT मध्ये गर्भलिंग निदान करून ठरवून गर्भपात केला जातो.

MTP ACT नुसार वैद्यकीय अधिकाऱ्याच्या निगराणीखाली पुराव्यासाठी त्यांनी दिलेले प्रमाणपत्र आधार मानून महिलेला गर्भपात करता येतो. महिलेच्या आरोग्यासह जर तिच्या आत्मसन्मानाचा विचार करून गर्भपात केला तर नक्कीच महिला मृत्यूदर प्रमाण कमी होईल. चला तर मग महिलेला आश्वस्त करू या सुरक्षित गर्भपात करून महिलेचे, मातेचे आरोग्य वाचवू या.



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अभिनंदन!

डॉ. विजय डोईफोडे ह्यांची ए.आय.आय.ए. नियामक मंडळावर नियुक्ती.



राष्ट्रीय शिक्षण मंडळाच्या नियामक मंडळाचे सदस्य व आयुर्वेद रसशाळा फाऊंडेशनच्या बोर्ड ऑफ डायरेक्टर्सचे चेअरमन डॉ. विजय डोईफोडे ह्यांची नुकतीच केंद्र शासनाच्या वतीने ऑल इंडिया इन्स्टिट्यूट ऑफ आयुर्वेद (AIIA), नवी दिल्लीच्या नियामक मंडळाचे सन्माननीय सदस्य म्हणून तीन वर्षासाठी नियुक्ती झाली आहे.

डॉ. डोईफोडे ह्यांनी टिळक आयुर्वेद महाविद्यालयाचे प्राचार्य, पुणे विद्यापीठ आयुर्वेद फॅकल्टीचे अधिष्ठाता, राष्ट्रीय शिक्षण मंडळाचे अध्यक्ष अशा अनेक प्रतिष्ठेच्या व जबाबदारीच्या पदांवर काम करून आपल्या कामाचा ठसा उमटवला आहे. तसेच अनेक संस्थांकडून त्यांना मानाचे सन्मान लाभले आहेत.

राष्ट्रीय शिक्षण मंडळ, आयुर्वेद रसशाळा फाऊंडेशन, टिळक आयुर्वेद महाविद्यालय, सेंटर फॉर पोस्ट ग्रेज्युएट स्टडीज, आयुर्विद्या मासिक समिती व अन्य घटक संस्थांचे वतीने डॉ. डोईफोडे ह्यांचे हार्दिक अभिनंदन व कार्यकालासाठी शुभेच्छा!

डॉ. सुभाष रानडे ह्यांना Life Time Achievement Award.

Global Ayush Festival 2020, First Foundation Day Celebration निमित्ताने आयोजित International E conference मध्ये VAS Award Ceremony मध्ये इंटरनॅशनल आयुर्वेद अॅकेडमीचे चेअरमन डॉ. सुभाष रानडे ह्यांना "जीवन गौरव पुरस्कार" प्राप्त झाला.

डॉ. रानडे टिळक आयुर्वेद महाविद्यालयाचे माजी विद्यार्थी असून त्यांनी पदवी व पदव्युत्तर वैद्यकीय शिक्षण प्राप्त केले आहे. तसेच टिळक आयुर्वेद महाविद्यालयात विद्यार्थीप्रिय अध्यापक म्हणूनही ते ख्यातकीर्त आहेत. डॉ. रानडे राष्ट्रीय शिक्षण मंडळाचे सक्रीय सभासद असून आयुर्वेद रसशाळा फाऊंडेशनच्या बोर्ड ऑफ डायरेक्टर्सचे सदस्य आहेत.



डॉ. सुभाष रानडे ह्यांची A.M.E. University मध्ये विज्ञीटींग प्रोफेसर पदावर नियुक्ती.

International European Academy of Ayurveda चे चेअरमन प्रा. डॉ. सुभाष रानडे ह्यांची नुकतीच "Alma Mater Europae University, Maribor, Slovenia मध्ये Visiting Professor for Teaching Faculty पदावर नियुक्ती झाली आहे.

राष्ट्रीय शिक्षण मंडळ, टिळक आयुर्वेद महाविद्यालय, आयुर्वेद रसशाळा व आयुर्विद्या मासिक समितीतर्फे डॉ. रानडे ह्यांचे हार्दिक अभिनंदन व शुभेच्छा !

स्वागत नवीन पुस्तकाचे

Title of Book - **Ayurvedic Way of Patient Examination.**

Authors - **Dr. Subhash Ranade and Dr. Sunanda Ranade.**

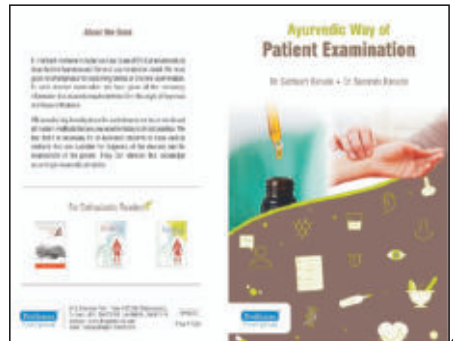
Publisher - **Proficient Publishing House.**

Language of Book - **English.**

Price of Book - **Rs. 120/-**

Highlights -

- 1) Various types of clinical examinations described in Ayurved and general examinations in detail.
- 2) Emphasis on explaining strotas or channels.
- 3) Integrated approach in explaining diagnosis and treatment modalities.



डॉ. पद्मनाभ केसकर, आत्ययिक रुग्णचिकित्सा - तज्ज्ञ अध्यापक, रुबी हॉल क्लिनिक, पुणे.

बुडाल्यामुळे बेशुद्ध झालेल्या माणसावर करायचे प्रथमोपचार

(Near Drowning/Dry Drowning)

सुमारे २ वर्षा पूर्वीची घटना पुण्यातील कॅम्प मधील आबेदा इनामदार कॉलेज च्या मुलींची ट्रिप कोंकणात गेली होती. मला वाटते मुरुड-जंजिऱ्याला, तिथे त्या धोकादायक समुद्रात खेळण्यासाठी उतरल्या आणि १४ मुली समुद्राच्या पाण्यात ओढल्या गेल्या आणि बुडाल्या स्थानिक नागरिकांनी आणि मच्चीमारांनी पाण्यात उड्या मारून त्या सर्वांना १० मिनिटांच्या आत पाण्यातून बाहेर काढले. तेव्हा त्या सर्व बेशुद्ध अवस्थेत होत्या, काही प्रथमोपचार दिले गेले पण एक पण मुलगी वाचली नाही. आई बापाने तळहातावरच्या फोडासारख्या जपलेल्या १४ मुली जग सोडून गेल्या..

कधी सोसायटी च्या स्विमिंग टँक मध्ये बुडून मृत्यू होतात तर कधी पर्यटनाला गेल्यावर अतिउत्साहीपणा नडतो.. घटना घडत राहतात. प्रश्न आहे ती घडल्यावर आपण काय करतो याचा.. आता पावसाळा चालू आहे.. असे समजा-गणपती विसर्जनाची मिरवणूक चालू आहे.. आणि एक उत्साही भक्त विसर्जनासाठी नदीत/समुद्रात उतरला. पाण्याला ओढ खूप आहे आणि एका बेसावध क्षणी तो पाण्यात ओढला गेला.. २ गटांगळ्या खाईपर्यंत तो दिसला आणि मग दिसेनासा झाला. किनाऱ्यावर जीवरक्षक तैनात होते, त्यांच्याकडे फ्लोटिंग स्ट्रॅचर होत्या. ते लगेच मदतीला धावले, बुडालेल्या त्या माणसाला किनाऱ्यावर आणले तेव्हा तो बेशुद्ध अवस्थेत होता.. त्याची छाती वरखाली होत नव्हती..

अशा या बुडाल्यामुळे बेशुद्ध झालेल्या माणसाचा जीव तुम्ही प्रथमोपचार देऊन कसा वाचवाल ?

उत्तर - भारतामध्ये कोणत्याही दुर्घटनेत हॉस्पिटल मध्ये पोहचण्या आधीच हजारो लोक मृत्युमुखी पडतात (Prehospital mortality) याचे एक कारण म्हणजे - प्रथमोपचार न मिळणे किंवा चुकीचे प्रथमोपचार मिळणे. लोकांना मदत करण्याची कधी कधी इच्छा असते पण काय करायचं हे माहित नसते आणि जे उत्साही लोक अपुऱ्या ज्ञानावर पुढे सरसावतात त्याने उपाय व्हायच्या ऐवजी अपाय होतो... त्यासाठी community education हाच उपाय आहे.

‘बुडाल्यामुळे बेशुद्ध पडलेल्या माणसाच्या पोटातले पाणी पोट किंवा छाती दाबून बाहेर काढणे’ हा उपाय म्हणजे त्याचा खून करणे या दर्जाचा आहे. ‘पोटातले पाणी बाहेर काढणे’ ही ‘बॉलीवूड’ guideline आहे.. हिरो बुडालेल्या हिरोईन चा जीव वाचवण्या साठी ज्या guidelines वापरतो त्याचा आपल्यावर

फार इम्पॅक्ट असतो, असो.

बुडल्यावर बेशुद्ध पडलेल्या माणसाच्या पोटातले पाणी बाहेर काढायचा प्रयत्न करणे हे पूर्णपणे चुकीचे (contraindicated) आहे. माणूस पाण्यात बुडतो तेव्हा सुरवातीच्या काळात त्याच्या नाका तोंडात जे पाणी शिरते ते फक्त अन्न नलिकेत आणि जठरात शिरते, ते श्वास नलिकेत आणि फुफुसात शिरत नाही.. काण? ... कारण आपल्या शरीरात एक reflex काम करतो - जेव्हा बुडताना माणूस पहिली गटांगळी खातो त्या क्षणाला शरीराला धोक्याची जाणीव होते आणि शरीर श्वास रोखून धरते.. श्वास मार्ग आकुंचित होतो.. श्वास मार्गावरचा पानासारखा भाग (epiglottis) श्वास मार्गाला बंद करतो आणि श्वासमार्गात पाणी जाण्यापासून वाचवतो.

याचा अनुभव घ्यायचा असेल तर उद्या अंधोळीच्या वेळी डोक्यावर अख्खी बादली पाणी ओता किंवा जोरात शॉवर सोडा आणि डोक्यावर पाणी घ्या... काय होत? तुम्हा त्याचवेळी श्वास घेऊ शकत नाही कारण शरीराला धोका वाटतो.. इथे तर माणूस खरोखर पाण्यात बुडत असतो तेव्हा हा reflex तीव्रतेने काम करतो आणि पाणी श्वासमार्गात जाण्यापासून वाचवतो.. आणि नंतर आपण काय करतो?... पोटातले पाणी पोट दाबून बाहेर काढायचा प्रयत्न करतो. त्याने काय होत? जठरातले पाणी वर येते व एव्हाना उघडलेल्या श्वासमार्गातून फुफुसात शिरते आणि बेशुद्ध माणूस गुदमरून (aspiration) मरतो. म्हणजे निसर्गाने/शरीराने एव्हादाया कष्टाने त्याला श्वासमार्गात पाणी जाण्यापासून वाचवले आणि तुम्ही त्याच्या साऱ्या प्रयत्नावर शद्धशः पाणी फिरवले.

तुम्ही म्हणाल जर त्याच्या फुफुसात पाणीच गेले नव्हते तर तो बेशुद्ध कसा पडला?... पोटात पाणी गेल्याने काही धोका उत्पन्न होत नाही (आपण रोज ३ लिटर पाणी पितो ना.. मग पोटातले पाणी पाणी बाहेर काढायची घाई का?)

बुडल्यावर माणूस बेशुद्ध पडतो तो श्वासमार्ग बंद पडल्याने.. तेवढा काळ oxygen न मिळाल्याने... पोटातल्या पाण्याचा बेशुद्ध पडण्याशी काही संबंध नाही.

काय प्रथमोपचार द्यायचे ?

ओले कपडे काढा.. ब्लॅकॅट मध्ये गुंडाळा.. थंडीपासून (Hypothermia) संरक्षण करा कारण ते कार्डियाक अररेस्ट चे एक कारण आहे. छातीकडे नजर टाका.. तो माणूस श्वास घेत नसेल. unresponsive असेल तर. लवकरात लवकर श्वासमार्ग मोकळा करा... तोंड स्वच्छ करा आणि डोके तिरके करून (हेड टिल्ट चीन लिफ्ट) पहिले ५ कृत्रिम श्वास mouth to mouth द्या.. कारण तो बेशुद्ध पडण्याचे कारण बंद झालेला श्वासमार्ग

आणि तेवढा वेळ मेंदूला न मिळालेला oxygen हे आहे (cause of unconsciousness is closure of airway and cerebral hypoxia)

एकदा का श्वासमार्ग मोकळा करून पहिले ५ श्वास दिले की लगेच ३० वेळा छाती दाबून मेंदूला oxygen युक्त रक्ताचा पुरवठा चालू करावा.. नंतर २ कृत्रिम श्वास द्यावे.. थोडक्यात ३०:२ या पद्धतीने CPR चालू करावा. (फक्त पहिले ५ कृत्रिम श्वास देणे हे वेगळेपण या ठिकाणी आहे).

थोडक्यात सांगायाचे झाले तर- १) पोटातले पाणी बाहेर

काढायचा प्रयत्न करू नये. २) अंगावरचे ओले कपडे काढून गरम कपड्यात गुंडाळून थंडीपासून बचाव करावा. ३) श्वासमार्ग मोकळा करून, तोंड साफ करून पहिले ५ कृत्रिम श्वास द्यावेत. ४) ३०:२ या ratio ने CPR चालू करावा व hospital मध्ये पोहचेल्यात brain death होऊ देऊ नये. ५) पाण्यावर तरंगणाऱ्या floating स्ट्रेचर चा वापर बुडणाऱ्या व्यक्तीला वाचवण्यासाठी करावा. पोटातले पाणी बाहेर काढण्याचा प्रयत्न न करता त्या १४ मुलींना वरील प्रथमोपचार मिळाले असते तर त्या वाचल्या असत्या.



कार्यकारी संपादकीय

आरोग्याची घटस्थापना !

- डॉ. अपूर्वा संगोराम

या वर्षीचा ऑक्टोबर महिना अनेक वेगवेगळ्या गोष्टींनी स्मरणात राहीला. सर्वात महत्वाचे म्हणजे गेले कित्येक महिने कोरोना रुग्णवाढीचा जो चढता आलेख होता तो प्रथमच या महिन्यात खाली येताना दिसला. त्यामुळे सर्व भारतीयांनी थोडासा निःश्वास टाकला. कोरोना रुग्णांच्या बरे होणाऱ्यांची टक्केवारीही जवळजवळ ८५% पर्यंत पोहोचली आणि मृत्युदरही आटोक्यात आला. याचा थोडक्यात अर्थ, बऱ्याचशा भारतीयांमध्ये कोरोनापासून दुर राहाण्यासाठी जी मुख्य त्रिसूत्री सांगितली आहे, (SMS - सोशल डीस्टेंसिंग/आंतरभान, मास्क/मुखपट्टी, सॅनिटायझेशन/निर्जंतुकीकरण) तिचा अवलंब करण्यास सुरुवात झालेली आहे. तसेच ज्याला आपण awareness / जागृती म्हणतो ती ही आता नागरीकांमध्ये दिसायला सुरुवात झालेली आहे.

याच महिन्यात अनलॉक ५ अंतर्गत जिम, हॉटेल्स, ही सुरु झालेले आहेत. थोडक्यात आपण पुन्हा न्यू नार्मल वर येण्याचा कसोशीने प्रयत्न करत आहोत. याचा अर्थ असा नव्हे की सर्व काही पूर्णपणे सुरळीत चालू झालेले आहे. कोरोनापासून थोडासा निःश्वास टाकेपर्यंत नैसर्गिक आपत्तींनी आपल्याला घेरले आहे. बंगालच्या उपसागरात कमी दाबाचा पट्टा निर्माण झाल्यामुळे अनेक ठिकाणी अतिवृष्टी झाली आणि त्याचा सर्वात मोठा फटका शेतकऱ्यांना बसला. ऊस, तूर, मूग, सोयीबीन, कापूस अशी अनेक काढणीला आलेली पिके या अवकाळी पावसामुळे वाहून गेली. शेतकऱ्यांच्या जमिनीच्या जमिनी पाण्याखाली गेल्या आणि त्यामुळेच बळीराजा हवालदिल झाला. एरवी याच दिवसात पिके पूर्ण तयार झालेली असतात, काढणीला आलेली असतात त्यामुळे हातात चार पैसे मिळतील म्हणून बळीराजा खुशीत असतो, पण या वर्षीच्या अवकाळी पावसामुळे त्याचे हे स्वप्न धुळीला मिळाले. दसरा दिवाळी सारखे मोठे सण तोंडावर असताना हे असे नुकसान होणे हे खरोखरच क्लेशदायक आहे. अर्थात शासन पातळीवर या सर्व नुकसानीचे पंचनामे करून

नुकसान भरपाई दिली जाईल असे आश्वासनही मिळाले आहे हे ही नसे थोडके.

याच महिन्यात १० ऑक्टोबर रोजी 'World Mental health day' संपूर्ण जगभरात पाळला जातो. शारीरिक आरोग्याबरोबर मानसिक आरोग्यही तितकेच महत्वाचे आहे.

सध्याच्या तणावग्रस्त परिस्थिती मुळे अनेकांचे मानस स्वास्थ्य बिघडलेले आहे. त्यामुळेच डिप्रेशन, अँझायटी अशा मानसविकारांनी लहानांपासून थोरांपर्यंत अनेक लोक ग्रस्त आहेत. यावर वेळीच उपचार केले नाहीत तर आत्महत्येसारखे टोकाचे पाऊल उचलले जाते. आयुर्वेद शास्त्रामध्ये 'प्रसन्नज्ञातमैन्द्रिय मनः स्वस्थ इत्यभिधीयते' अशी स्वस्थ व्यक्तीची व्याख्या केली आहे. ज्याच्या शरीरातील दोष, धातु, मल साम्यावस्थेत आहेत व ज्याची इंद्रिये, आत्मा आणि मन हे प्रसन्न आहेत त्याला स्वस्थ म्हणावे' असे आयुर्वेद मानतो. सर्वसामान्य जनतेसाठी असे हे शारीर मानस स्वास्थ्य टिकवण्यासाठी आणि निरोगी संपन्न, दीर्घायुषी होण्यासाठी काय करता येऊ शकेल? हा विचार मनात ठेवून आयुर्विद्या मासिक समिती तर्फे दरवर्षी 'आरोग्यदीप' नावाच्या दिवाळी अंकाची निर्मिती केली जाते. याही वर्षी 'स्वास्थ्यरक्षण' आणि 'आरोग्यसंवर्धन' अशी संकल्पना घेऊन 'आरोग्यदीप' दिवाळी २०२० वाचकांच्या भेटीसाठी सज्ज झाला आहे. आयुर्वेद, अलोपॅथी, होमिओपॅथी, योगशास्त्र अशा सर्वच पंथींच्या प्रथितयश तज्ञांनी स्वास्थ्यरक्षण व आरोग्यसंवर्धन या विषयी अतिशय सोप्या शब्दात बहुमोल मार्गदर्शन केले आहे. सर्वच दृष्टीने संग्राह्य असा हा अंक आहे.

नवरात्राच्या नऊ दिवशी घटामध्ये देवीची स्थापना करून, अखंड दीप तेवत ठेवला जातो. आपणही सर्व या दसरा दिवाळीच्या निमित्ताने आपल्या आरोग्याचा दीप अखंड तेवत ठेवू या!

सर्वांना दसरा दिवाळीच्या आरोग्यपूर्ण शुभेच्छा!





उपसंपादकीय

आरोग्यदीप उजळता...

- डॉ. सौ. विनया दीक्षित

आरोग्य संवर्धन व संरक्षणाची मोठी शिदोरी घेऊन 'आरोग्यदीप २०२०' हा दिवाळी अंक नव्या रूपात या दिवाळीला वाचकांच्या भेटीस येत आहे. समाजासाठी समाजाचं देणं याच समर्पित भावनेने २०१५ साली राष्ट्रीय शिक्षण मंडळाने 'आरोग्यदीप' दिवाळी अंकाची मुहूर्तमेढ रोवली. इवलेसे ते रोप आता चांगलेच बहरू लागले आहे.

रोटरी क्लब ऑफ इंडियाच्या पुणे वेस्ट झोन तर्फे आयोजित राज्यस्तरीय दिवाळी अंक स्पर्धेत आरोग्य क्षेत्रात सलग तीन वेळा मानाचा पुरस्कार प्राप्त करणारा **आरोग्यदीप** हा अंक! २०१९ साठी दिनमार्क पब्लिकेशन तर्फे आयोजित आंतर राष्ट्रीय स्पर्धेतही पुरस्कार मिळवलेला हा दिवाळी अंक! सर्व संपादक मंडळाच्या एकत्रित प्रयत्नांतून, मा. अध्यक्ष व प्रधान संपादकांच्या उत्साही मार्गदर्शनाने अतिशय सुबकपणे वेळेतच तयार झाला व २९ ऑक्टोबर २०२० ला समारंभपूर्वक प्रकाशितही झाला!

वाचक व जाहिरातदारांच्या मागणीनुसार आरोग्य रक्षणासाठी बाल-वृद्ध-स्त्रिया, प्रौढ सर्वांचे वयोगटांना उपयुक्त अशी अनुभव समृद्ध तज्ज्ञ डॉक्टरांच्या लेखांची मेजवानी घेऊन दिवाळीला प्रत्येक घरात नव्याने आरोग्याचा दीप लख्ख उजळण्यासाठी सिद्ध आहे. या शिवाय सर्वांना आवडतील अशा व उपयुक्त आरोग्य संवर्धन करणाऱ्या,

सौंदर्य रक्षण करणाऱ्या, शक्ती जोपासणाऱ्या पाक कृती व सोप्या औषधी निर्माण पद्धती ही यात समाविष्ट केल्या आहेतच. शद्वकोडे, आरोग्यभविष्य या लोकप्रिय सदरांबरोबर आपले आवडे सिनेकलाकार सुंदर आरोग्य करे जपतात हे ही स्वस्थ मुलाखतीत प्रिया बापट या गुणी व प्रसिद्ध अभिनेत्रीने उलगडून सांगितले आहे.

आरोग्यापूर्ण देंनदिनी व निरोगी राहण्यासाठी योग्य योगासने यांचे सचित्र मार्गदर्शन वाचकांना निश्चितच स्वतःच्या कुटुंबीयांचे स्वास्थ्य जपण्यासाठी वर्षानुवर्षे उपयोगी ठरणार आहे.

सुखी दीघीयुष्याचा अनुभव समृद्ध असा हा कानमंत्र सादर करताता संपूर्ण 'टीम आयुर्विद्याला' अतिशय आनंद होतोच व कुठेतरी सामाजिक बांधिलकी जपता आली यासाठी एक कृतार्थ भावनाही मनात उमटते.

अतिशय स्वल्प स्वागत मूल्य दरात संपूर्ण गुळगुळीत पानांवरचा रंगीत आकर्षक असा हा **आरोग्यदीप २०२०** मुळे घरोघरी आरोग्य-समृद्धी व आनंद भरभरून उजळू दे! श्री धन्वंतरी कृपेने जगावरचे सर्व काळे महामारीचे सावट दूर होऊन लख्ख प्रकाशाने नव्या वर्षाची मंगलमय सुरुवात होऊ दे!!



रोटरी पुरस्काराने सन्मानित
आरोग्यदीप
२०१७ व २०१८



आरोग्यदीप २०१९
छंदश्री आंतरराष्ट्रीय दिवाळी अंक स्पर्धा
द्वितीय पारितोषिक विजेता.

आवाहन!!

*** आरोग्यदीप २०२० ***

प्रकाशित झाला आहे.
आपल्या मित्रमंडळींना दिवाळी निमित्त
ही आरोग्यपूर्ण भेट देण्यासाठी
आपली मागणी आजच नोंदवा.
१० किंवा १० च्या पटीत अंक खरेदीवर
आकर्षक सवलत उपलब्ध !

अधिक माहितीसाठी संपर्क -

प्रा. डॉ. अपूर्वा संगोराम (९८२२०९०३०५), प्रा. डॉ. विनया दीक्षित (९४२२५१६८४५)

