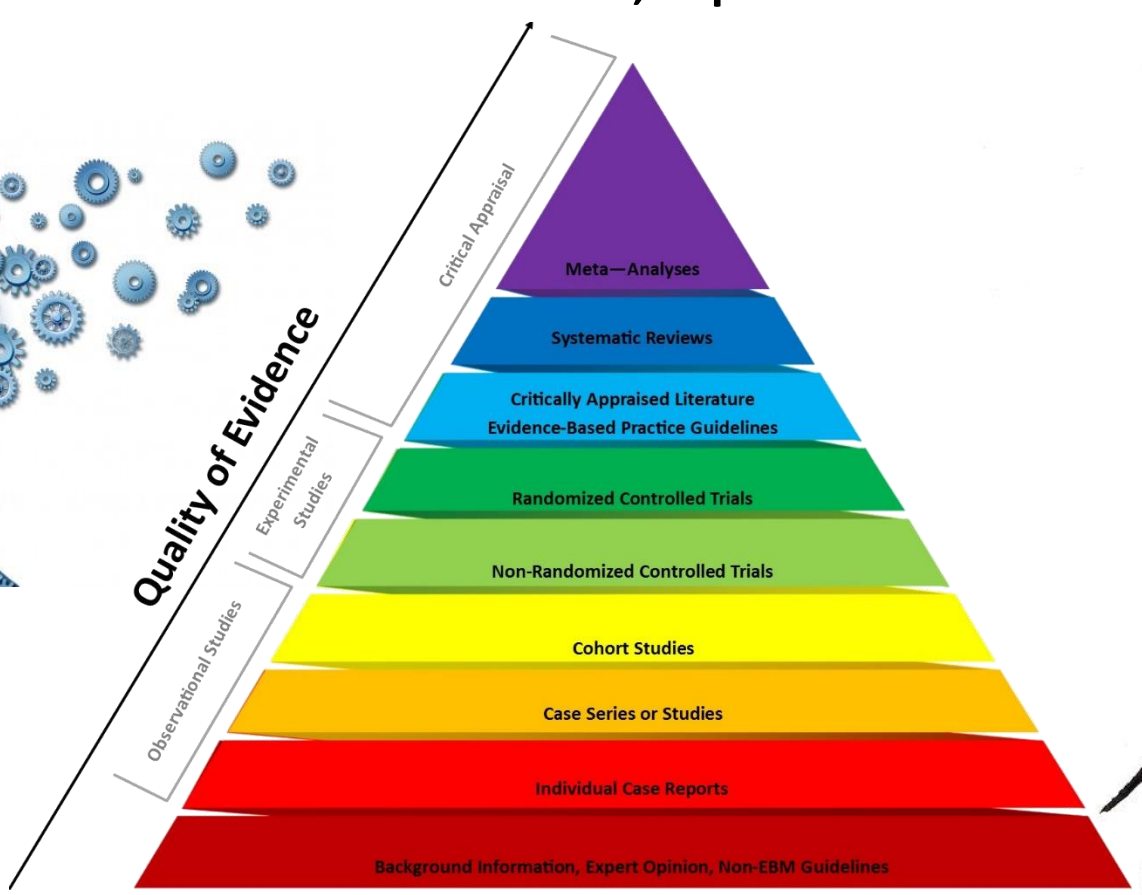
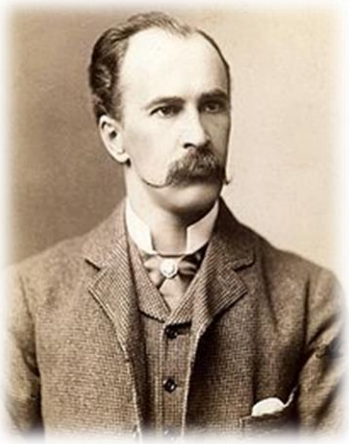
St John's National Academy of Health Sciences
St John's Medical College Hospital, Bengaluru

Hospital Weekly Newsletter

Issue 4, September 6th 2018



HISTORY OF Medicine



SIR WILLIAM OSLER

EDITORS:
Dr. Sanjiv Lewin
Dr. Avinash. H. U

UPDATES THIS WEEK

ST. JOHN'S NEUROSCIENCES CROSS A MILESTONE IN THE MANAGEMENT OF REFRACTORY EPILEPSY

A 14-year-old boy, suffering for the past 10 years with medically refractory seizures due to underlying hypoxic brain injury. Despite multiple anti-epileptic medications, he continued to have 3-4 sudden, forceful drop attacks per day with forehead injuries. His mother had to give up her daily wage job to be with him all the time. His epilepsy has put enormous emotional, financial and physical burden on the family.

In our epilepsy clinic, his workup indicated that the bilateral extensive gliosis and epileptiform discharges from multiple brain areas was unlikely to be helped by curative surgery. Here, palliative surgical options, namely, corpus callosotomy and Vagus nerve stimulation (VNS) were considered. Though both were likely to be equally effective, the destructive, irreversible nature of a callosotomy opt and family reluctance to undergo brain surgery favored the clinical decision of proceeding with Vagus nerve stimulation therapy. The Vagus nerve stimulation (VNS) is a battery-powered device similar to a cardiac pacemaker. Stimulating leads are surgically placed around the left vagus nerve in the carotid sheath and connected to a stimulator placed in the subcutaneous pocket in the anterior chest wall. Stimulation parameters are gradually increased over few weeks to reach the target levels. As the Vagus nerve has extensive innervations to various brain regions, its chronic stimulation is believed to modulate the epileptogenic circuits in the brain. The benefits, in the form of decreased frequency and severity of seizures, are cumulative over several months to years. Controlled trials in individuals greater than 12 years of age with focal epilepsy indicate that 30 to 40 % achieve a greater than 50 % reduction in seizure frequency.

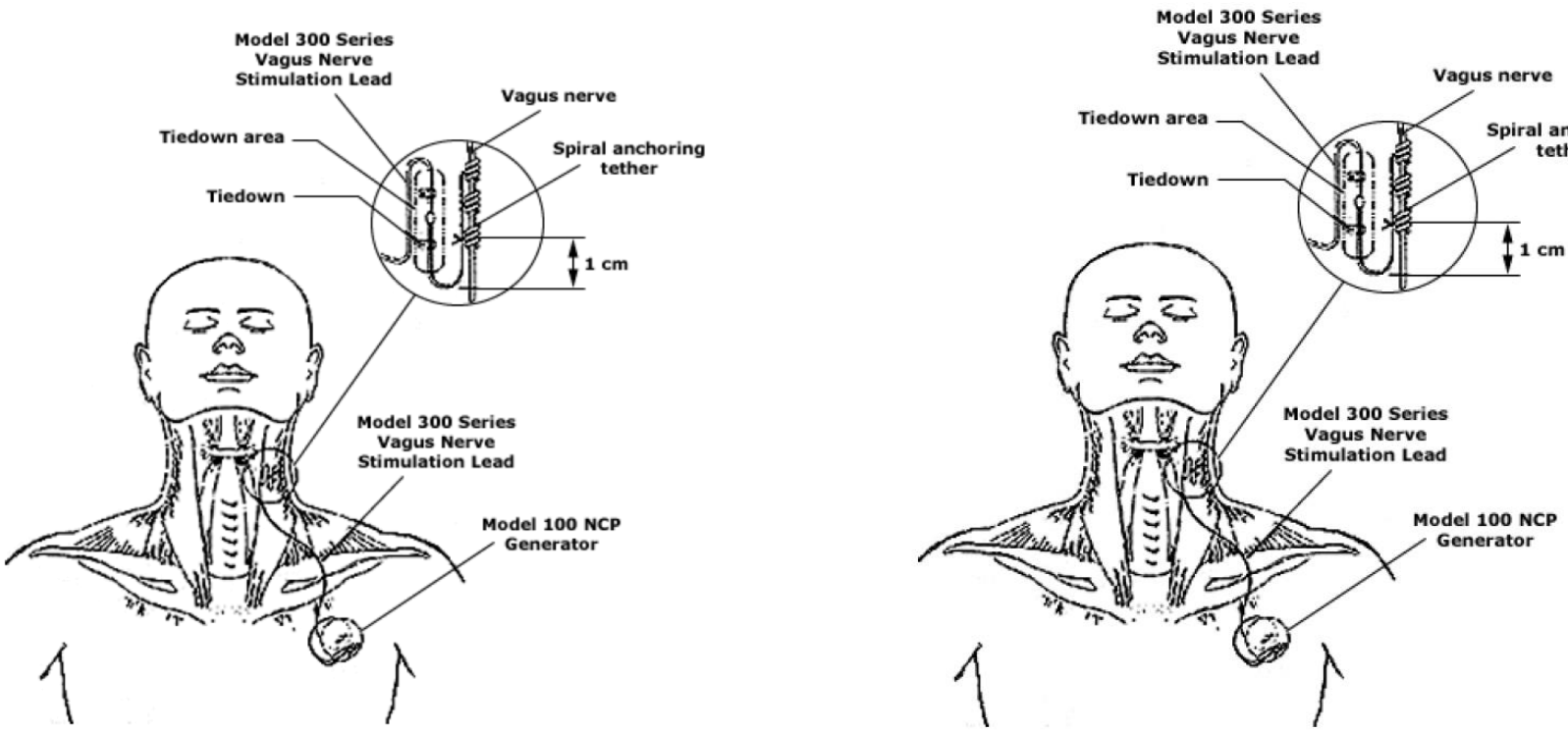
The main limiting factor of this procedure is the high cost (7 to 13 lakh rupees). However, PS has been generously supported by a Government scheme which partially funded the procedure, by the Liva Nova Company, which provided the instrument at not-for-profit price and by the St. John 's administration, which brought down all the medical and surgical expenses to bare minimum. With these collective efforts, Vagus nerve stimulator was successfully implanted on 12th September 2018 by the Neurosurgery team of Dr. Venkatesh S. Madhugiri in a deft surgery that lasted little over an hour.

UPDATES THIS WEEK

ST. JOHN'S NEUROSCIENCES CROSS A MILESTONE IN THE MANAGEMENT OF REFRACTORY EPILEPSY Contd…..

It is too early to judge the benefits of the surgery in this child now, but it is certainly a big step for the Neurosciences departments and the St. John's institute that a state of the art epilepsy surgery has been provided virtually free to an economically strained family through collective efforts and unconditional support. I hope we would help many more such patients with uncontrolled epilepsy by a combination of scientific technology and humane touch.

- ***Dr. G.R.K. Sarma, Professor of Neurology***
- ***Dr. Venkatesh S. Madhugiri, Professor and Head of Neurosurgery***



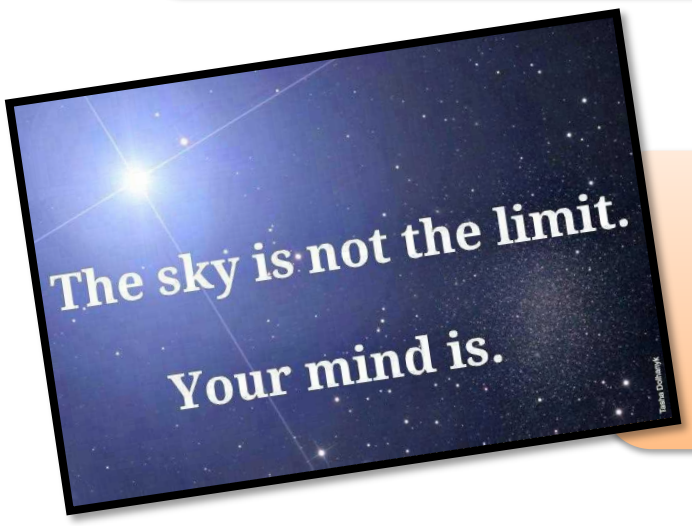
DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

Dr. Annamma Thomas, Professor Grade 1 of Department of OBG, has been appointed as Head of the Department of Obstetrics and Gynaecology with effect from 14th September 2018 to 13th September 2022.

Pearls of Wisdom

If the wind will not serve, take to the oars.

- Latín Proverb

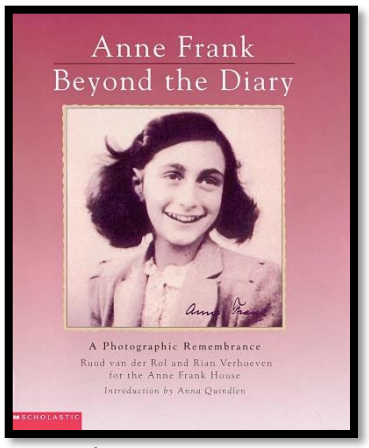


Don't tell me The sky's the limit when there's foot prints on The Moon.

- Paul Brandt

How wonderful it is that nobody need wait a single moment before starting to improve the world.

- Anne Frank



A Bird's Eye View..... **MEDICINE Dis WEEK**

06th September 2018

Tight Glycemic Control in Critically Ill Children:

In a multicentric randomised study on 713 critically ill children. Tight glycemic control with stringent measures to maintain the blood sugar levels within a range of 80-110mg/dL did not improve the outcome as compared to the liberal levels of 150-180mg/dL.

-Agus MSD et al, N Engl J Med 2017; 376:729-741.

Higher rate of Recurrence with Ultra light-weight for Inguinal hernia repair

In a large randomised control study of 950 adult patients who underwent Endoscopic Totally Extraperitoneal Inguinal hernia repair called TULT-Trial; it was shown that there was significantly higher rate of recurrence at the end of 5 years with Ultra light-weight mesh as compared heavy-weight mesh. The recurrence rate was 3.8% for Light weight versus 1.1% for Heavy weight (p = 0.003).

-Roos MM et al, Ann Surg. 2018 Aug;268(2):241-246.

Do you have anything interesting to be published?
Write to Dr. Avinash. H. U, avinash.hu@stjohns.in

The NEW ENGLAND JOURNAL of MEDICINE

REFERENCE 1: MEDICINE DIS WEEK

ORIGINAL ARTICLE

Tight Glycemic Control in Critically Ill Children

M.S.D. Agus, D. Wypij, E.L. Hirshberg, V. Srinivasan, E.V. Faustino, P.M. Luckett, J.L. Alexander, L.A. Asaro, M.A.Q. Curley, G.M. Steil, and V.M. Nadkarni, for the HALF-PINT Study Investigators and the PALISI Network*

ABSTRACT

BACKGROUND

In multicenter studies, tight glycemic control targeting a normal blood glucose level has not been shown to improve outcomes in critically ill adults or children after cardiac surgery. Studies involving critically ill children who have not undergone cardiac surgery are lacking.

METHODS

In a 35-center trial, we randomly assigned critically ill children with confirmed hyperglycemia (excluding patients who had undergone cardiac surgery) to one of two ranges of glycemic control: 80 to 110 mg per deciliter (4.4 to 6.1 mmol per liter; lower-target group) or 150 to 180 mg per deciliter (8.3 to 10.0 mmol per liter; higher-target group). Clinicians were guided by continuous glucose monitoring and explicit methods for insulin adjustment. The primary outcome was the number of intensive care unit (ICU)–free days to day 28.

RESULTS

The trial was stopped early, on the recommendation of the data and safety monitoring board, owing to a low likelihood of benefit and evidence of the possibility of harm. Of 713 patients, 360 were randomly assigned to the lower-target group and 353 to the higher-target group. In the intention-to-treat analysis, the median number of ICU-free days did not differ significantly between the lower-target group and the higher-target group (19.4 days [interquartile range {IQR}, 0 to 24.2] and 19.4 days [IQR, 6.7 to 23.9], respectively; P=0.58). In per-protocol analyses, the median time-weighted average glucose level was significantly lower in the lower-target group (109 mg per deciliter [IQR, 102 to 118]; 6.1 mmol per liter [IQR, 5.7 to 6.6]) than in the higher-target group (123 mg per deciliter [IQR, 108 to 142]; 6.8 mmol per liter [IQR, 6.0 to 7.9]; P<0.001). Patients in the lower-target group also had higher rates of health care–associated infections than those in the higher-target group (12 of 349 patients [3.4%] vs. 4 of 349 [1.1%], P=0.04), as well as higher rates of severe hypoglycemia, defined as a blood glucose level below 40 mg per deciliter (2.2 mmol per liter) (18 patients [5.2%] vs. 7 [2.0%], P=0.03). No significant differences were observed in mortality, severity of organ dysfunction, or the number of ventilator-free days.

CONCLUSIONS

Critically ill children with hyperglycemia did not benefit from tight glycemic control targeted to a blood glucose level of 80 to 110 mg per deciliter, as compared with a level of 150 to 180 mg per deciliter. (Funded by the National Heart, Lung, and Blood Institute and others; HALF-PINT ClinicalTrials.gov number, NCT01565941.)

The authors' full names, academic degrees, and affiliations are listed in the Appendix. Address reprint requests to Dr. Agus at Boston Children's Hospital, 300 Longwood Ave., Boston, MA 02115, or at michael.agus@childrens.harvard.edu.

*A complete list of the Heart and Lung Failure–Pediatric Insulin Titration (HALF-PINT) study investigators and a description of the involvement of the Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) network are provided in the Supplementary Appendix, available at NEJM.org.

This article was published on January 24, 2017, at NEJM.org.

DOI: 10.1056/NEJMoa1612348

If your are interested in Full Articles: Please mail to avinash.hu@stjohns.in

REFERENCE 2: MEDICINE DIS WEEK

Higher Recurrence Rate After Endoscopic Totally Extraperitoneal (TEP) Inguinal Hernia Repair With Ultrapro Lightweight Mesh

5-Year Results of a Randomized Controlled Trial (TULP-trial)

Marleen Roos, MD, Wouter J. Bakker, BSc,* Nelleke Schouten, MD, PhD,† Charlotte Voorbrood, MD, PhD,* Geert Jan Clevers, MD, PhD,* Egbert Jan Verleisdonk, MD, PhD,* Paul Davids, MD, PhD,* and Josephina Burgmans, MD, PhD**

Objective: The aim of this study was to determine inguinal hernia recurrence rates 5 years after endoscopic totally extraperitoneal (TEP) inguinal hernia repair when either lightweight or heavyweight mesh was used.

Background: Recurrence is an important complication of inguinal hernia surgery. Higher recurrence rates of Ultrapro lightweight meshes after TEP repair have been demonstrated, yet data regarding long-term follow-up are limited.

Methods: From 2010 to 2012, 950 male adult patients with primary unilateral hernias were randomized to TEP hernia repair with heavyweight (Prolene) or lightweight (Ultrapro) mesh. Five years postoperatively, the validated PINQ-PHONE telephone questionnaire was carried out. Participants with a positive questionnaire reply were scheduled for a clinical visit. A recurrence was defined as a clinically detectable bulge in the operated groin on physical examination.

Results: Data on development of recurrence could be obtained from 790 patients (83.2% 5-year follow–up rate). Four patients presented with a recurrence at the outpatient clinic between 2 and 5 years postoperatively. Thirty-five patients (4.6%) with a positive PINQ-PHONE reply (60.0% lightweight vs 40.0% heavyweight) were physically examined at the outpatient clinic. In 2 patients (lightweight) a recurrence was detected. The total 5-year recurrence rate after TEP hernia repair was 2.4% (3.8% lightweight, 1.1% heavyweight, $P = 0.01$). A significantly higher recurrence rate for lightweight mesh in primary direct hernias was found ($P = 0.003$).

Conclusions: The overall recurrence rate 5 years after TEP repair was low. Ultrapro lightweight meshes showed higher recurrence rates than heavyweight meshes and are not recommended for endoscopic TEP inguinal hernia repair.

Keywords: heavyweight mesh, inguinal hernia, lightweight mesh, recurrence, totally extraperitoneal repair

(*Ann Surg* 2017;xx:xxx–xxx)

Recurrence rates of inguinal hernia repair have dropped dramatically after the introduction of tension-free mesh repair, which has become standard of care.[1,2] Also, endoscopic tension-free preperitoneal approaches have become increasingly popular, because these techniques yielded additional advantages such as faster recovery, lower recurrence rates, and a lower incidence of chronic pain compared to open techniques.[3–5]

When evaluating outcomes of inguinal hernia repair, chronic pain remains a significant problem. It is hypothesized that the mesh-induced inflammatory reaction with subsequent formation of fibrosis might play a substantial role in the occurrence of chronic pain.[6] Assuming the severity of the inflammatory response might correlate with the amount of mesh material and its pore sizes, lightweight meshes with larger pores have been developed.[7,8] In open anterior inguinal mesh repair, less pain and foreign body feeling were described when a lightweight mesh was used.[9] However, in endoscopic inguinal hernia repair, these benefits could not be shown and lack of consensus exists regarding the best mesh for this operative technique.[10]

We performed a prospective double-blinded randomized controlled trial (TULP-trial) analyzing the outcomes of lightweight (Ultrapro) versus heavyweight (Prolene) mesh after endoscopic totally extraperitoneal (TEP) inguinal hernia repair in a hernia expertise center (Hernia Clinic Diakonessenhuis Zeist, The Netherlands) up to 2 years postoperatively. Use of lightweight mesh did not lead to less chronic postoperative pain.[11,12] However, outcomes of this trial demonstrated an increased incidence of recurrence when lightweight mesh was used. This finding was supported by the results of other studies.[13–15]

Up till now, few data are published with regard to long-term recurrence after TEP inguinal hernia repair with use of different mesh types.

The aim of the present study was to determine the recurrence rate 5 years after endoscopic TEP inguinal hernia repair when either a lightweight or heavyweight mesh was used.

METHODS

Study Design

A 5-year follow-up of a previously performed double-blind randomized controlled trial (TULP-trial) comparing lightweight and

From the *Department of Surgery/Hernia Clinic, Diakonessenhuis Zeist/ Utrecht, The Netherlands; and †Department of Surgery, Maastricht University Medical Center, Maastricht, The Netherlands.

A research grant has been assigned to the Diakonessenhuis/Hernia Clinic Zeist by Johnson & Johnson Medical BV to partially support all research regarding the endoscopic totally extraperitoneal hernia repair.

Disclosures: M.M.R., W.J.B., C.E.H.V., G.J.C., E.J.M.M.V., P.H.P.D., and J.P.J.B. confirm that a Research Grant has been assigned to the Diakonessenhuis Utrecht/Zeist, or more specifically to the Hernia Centre Zeist, by Johnson & Johnson Medical BV. The Research Grant is intended to support all manuscripts regarding the results and complications of the Totally Extraperitoneal (TEP) endoscopic hernia repair. This study itself is not directly subject of the Research Grant. Johnson & Johnson has and will have no access to data upon which the manuscript is based. A copy of the manuscript will only be provided at acceptance of the manuscript. Johnson & Johnson has no influence on the (subject of) this study whatsoever. Objectivity of data is therefore guaranteed and there is no conflict of interest. There are no (other) commercial associations that might pose a conflict of interest in connection with the submitted article. N.S. has no conflicts of interest or financial ties to disclose.

Reprint: Marleen Roos, MD, Department of Surgery, Diakonessenhuis Utrecht/ Zeist, Room, Secretariaat Heelkunde, Professor Lorentzlaan 76, 3707 HL Zeist, The Netherlands. E-mail: mroos@diakhuis.nl.

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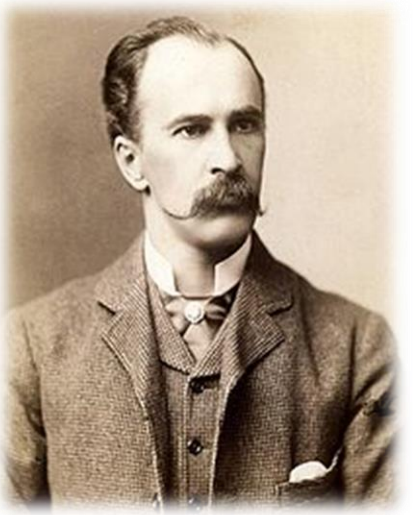
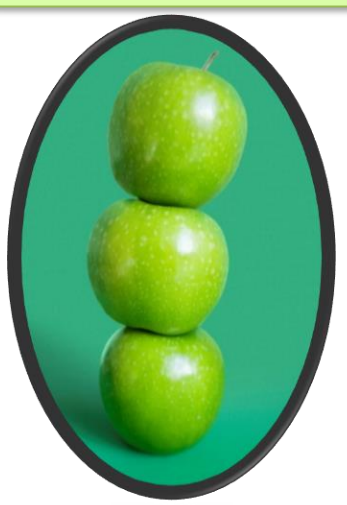
The Quotable OSLER

Protect your Ideals:
And, if the fight is for principle and justice, even when failure seems certain, where many have failed before, cling to your ideal, and, like Childe Roland [From "Childe Roland to the Dark Tower Came" by Robert Browning (1812-1889)] before the dark tower, set the slug-horn to your lips, blow the challenge, and calmly await the conflict.



SIR WILLIAM OSLER

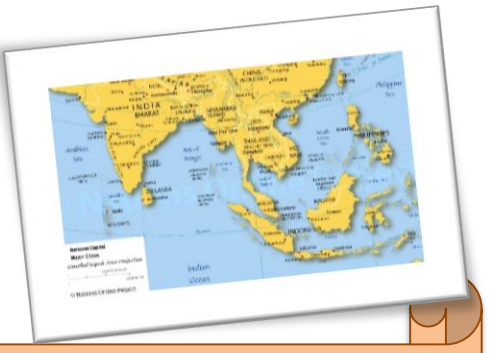


There are three lessons to learn:
Mastery of Self, Conscientious devotion to duty, deep human interest in human beings – these best of all lessons you must learn now or never.

06th September 2018

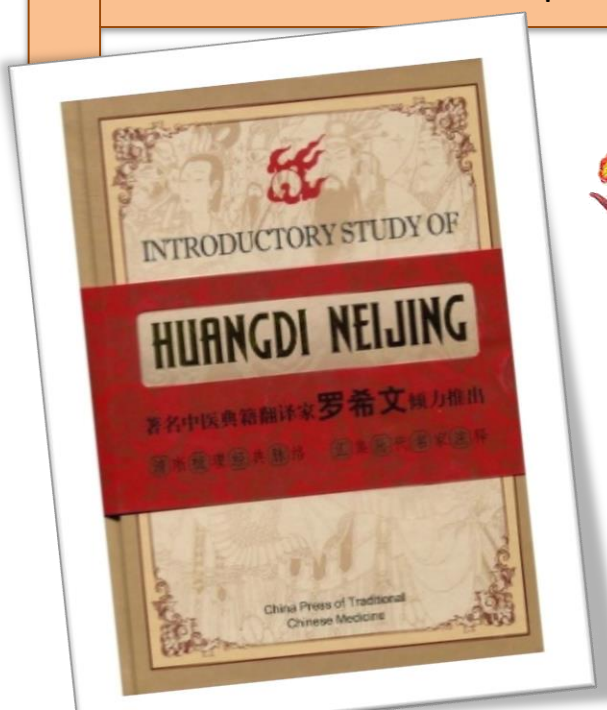
It's story TIME

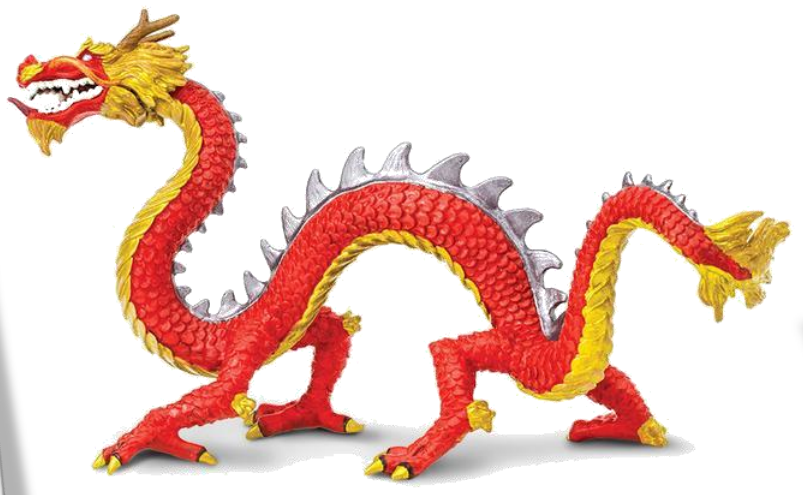
The Story of Medicine



Concept of Disease: Early Eastern Civilizations (India & China)

In China, the 'Huangdi Neijing' (of the Yellow Emperor's Inner Canon) was a fundamental source of Chinese medicine for some two millenia and continues to be studied today by practitioners of Traditional Chinese Medicine (TCM). Chinese medicine reached Japan between 6th and 9th centuaries, mainly via Korean peninsula, and was developed in Japan as Kampo ('the way of the Chinese'). Prayer and respect for the Gods, as for example, Dhanvantari, the God of Ayurvedic medicine, remains an important part of Eastern medicine.





Dhanvantari, God of Health in Hindu Mythology

Picture of the Week

Every “Autumn Muse” will have this visitor – Vulture which was created by Dr. Arun Cardoza

Picture Courtesy; Dr. Rakesh Ramesh