CAPE NEWS

Newsletter of the Indian Society for Pediatric & Adolescent Endocrinology (ISPAE)

www.ispae.org.in

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PEDICON 2009: ENDOCRINE PEARLS

M Vijayakumar, Calicut

A journey through various halls during the Bangalore Pedicon in January 2009.

GROWTH MONITORING & GROWTH DISORDERS

*Height recording has not been given the importance it deserves. Proper equipment is not available even in many big hospitals.

*For measuring height, a proper instrument, preferably a stadiometer, should be used. Ask the child to "breathe in and stand tall". Use gentle upward traction over the mandibles to straighten the cervical spinal curvature.

* **Which growth chart** should be used? Among the current growth charts available, the Agarwal height and weight charts, based on affluent Indians, are probably most appropriate, and have been endorsed by IAP.

*The median height for an 18 year old boy by Agarwal standards falls between 10-25th centile of CDC standards.

***Target** or **mid parental height** (MPH) and the target centile range is plotted on the right hand side of the chart, corresponding to 18 years. For boys a range of 10 cm and for girls 8 cm around the MPH represents the target centile range. Target height provides the genetic basis of one's growth.

*Definition of **short stature**: Height below 3rd centile or 2SD below the mean for that age and sex. Children with height velocity less than 25th centile of the normal over a period of observation of 6–12m are also considered short.

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ISPAE WEBSITE

Have you seen our website? www.ispae.org.in. Please use it, send contributions, suggest changes and improvements for it, and inform others who are likely to find it useful.

ISPAE MEETINGS

ISPAE 2009 is in New Delhi: 13-15th November, 2009. Organizing Secretaries: Archana Arya & V Bhatia, Email: ispae2009@gmail.com. For details, see website.

ISPAE-PET 2009 (Pediatric Endocrine Training program): NIB, NOIDA: 10-13 Nov 2009. Contact: Anju Seth, anju_seth@yahoo.com. For details, see website.

SECRETARY'S MESSAGE

Dear members,

I am grateful for the trust you have placed in me as the incoming Secretary-Treasurer of ISPAE. This Society owes its origins to its founding members including Dr. Meena Desai, Dr. Menon and Dr. Raghupathy. Their vision and wisdom have been instrumental in fostering the growth of this group over the last three decades. I would also like to express my thanks and deep appreciation to Dr Anju Virmani and Dr Vijayalakshmi Bhatia for the outstanding job

they have done as the President and Secretary-Treasurer respectively. It may not be easy to fill in the shoes of the outgoing leadership, but I am pleased to report that the new team, including Dr Nalini Shah, Dr Sudha Rao and the Executive Committee has begun a major effort to seek inputs from the entire membership and implement the plans initiated by the previous Executive.

We have already added 21 new members (and counting!) this year, reaching nearly 150. I would like to welcome the new members and look forward to your whole hearted participation in ISPAE activities.

The highlights of activities planned for the next 2 years include the **first biennial conference of ISPAE** to be held in November 2009 in Delhi, whose organizing secretaries are Dr V Bhatia and I. As you know, it is being supported by the European Society for Pediatric Endocrinology (ESPE) and Asia Pacific Pediatric Endocrine Society (APPES) and held jointly with Delhi IAP. It promises to be an academic feast for all of us, with 11 international faculty and reputed national faculty. The scientific program has been planned keeping in mind the needs of both pediatricians and endocrinologists. We already have over 60 registrations.

The last day of the conference - 15th November - will be devoted to clinical pediatric endocrinology relevant to the practicing pediatrician. They can register for that date alone, if they choose to do so. We have kept the registration rates very affordable, and will welcome participation from any health care personnel with interest in the subject.

Prior to the main conference we are organizing a Pediatric Endocrine Training program (PET) for pediatricians and endocrinologists interested in honing their pediatric endocrine skills. The participants will be selected by a committee. This will be the first intensive training program of its kind to be held in India. We are being helped in developing the program with intensive inputs from ESPE, and also APPES. Detailed information about the conference is available at our website ***www.ispae.org.in***

The Executive is also planning to formulate Clinical Guidelines for common pediatric endocrine conditions, under the stewardship of Dr Desai, Dr Nalini Shah, and Dr Aspi Irani. We plan to publish these guidelines and make them available on our website.

Dr Bhatia has done a superb job in setting up the society website and we hope to add more information periodically that would be relevant to patients as well as the physicians. We invite material and inputs from all of you in this effort. We also hope to make the website more interactive, if the budget permits.

It is important that we make an extra effort to spread awareness about pediatric endocrinology all over the country. Our members help with this goal by organizing scientific programs in their own areas. We in the Executive are open to suggestions from all members. You can reach me at ***adayal35@hotmail.com***.

I am looking forward to working with you all. Our President Dr Shah, joint secretary Dr Rao and our Executive hope to make ISPAE more visible on the national and international endocrine map. Under continued guidance of our mentors, we feel confident of a highly productive and exciting future for the Society.

With best wishes
Archana Dayal Arya

ISPAE NEWS
Minutes of the Annual GBM 2009: Bangalore

V Bhatia, Outgoing Secretary- Treasurer

The Annual GBM was held on 21st January 2009 at 5.30 pm, in Sagar Apollo Hospital during the Pedicon 2009 preconference workshop. It was attended by 13 members (Drs Ayyavoo, R Shastry, SS Managoli, M Vijayakumar, G Jevalikar, Biresh Kumar, P Raghupathy, M Desai, IPS Kochar, S Bhattacharya, V Khadilkar, S Dey, and V Bhatia) and chaired by Dr Meena Desai. The annual report, minutes of last GBM, and audited statements of 2007-2008 were unanimously passed. Dr Desai formally thanked the outgoing executive and office bearers for their good work in looking after the interests of the Society.

Dr V Bhatia informed the members about progress on the arrangements for the biennial meeting ISPAE 2009 and the pediatric endocrinology training program, ISPAE-PET 2009, to be held in November 2009 in Delhi.

Dr Bhatia brought up the issue of the need in the country for formal courses in pediatric endocrinology of 1 or 2 years duration and urged all members in teaching positions to think of the same in their institutions.

Dr S Dey brought up the need for Indian guidelines for management of various pediatric endocrine conditions. Members were informed that Dr A Irani had recently volunteered to make guidelines on behalf of ISPAE on Care of Children with Diabetes. Dr Dey volunteered to do the same for Obesity. They were informed that they should propose to the Guidelines Committee of ISPAE the "writing committee" they would like to form for their respective topics, and go ahead to work on guidelines to publish in Indian Pediatrics, endorsed by ISPAE.

Dr Dey also brought up the issue of difficulty in accessing international journals, and asked whether the Society could subscribe to on-line journals or MD consult, for use by its members. It was concluded that the present resources available to the Society did not support this possibility, though the idea was an excellent one to remember for the future.

Members appreciated the great job being done by Dr A Virmani as Editor of CAPENEWS. Dr Meena Desai proposal to request Dr Virmani to continue as the editor was agreed by all members, and it was unanimously resolved to continue to appoint Dr Virmani as Editor of CAPENEWS.

The meeting ended with thanks to the Chair.

NEW MEMBERS:
A VERY WARM WELCOME!!

1. **Dr SONA ABRAHAM,** Delhi
2. **Dr ALKA,** Delhi.
3. **Dr RAJSHEKHAR BATCHU,** Vishakhapatnam.
4. **Dr TANMAY BHARANI,** Indore.
5. **Dr ARUNALOKE BHATTACHARYA,** Kolkata.
6. **Dr DEVI DAYAL,** Chandigarh.
7. **Dr LALIT M KAUSHIK,** Delhi.

8. **Dr ANKUR GAHLOT,** Delhi.
9. **Dr HARMANDEEP K GILL,** Delhi.
10. **Dr KANCHAN KEWALRAMANI,** Mumbai.
11. **Dr BIRESH KUMAR,** Siliguri.
12. **Dr PARAMJIT S KUMAR,** Delhi.
13. **Dr ANURAG RANJAN LILA,** Delhi.
14. **Dr SS MANAGOLI,** Bangalore.
15. **Dr SARA MATHAI,** Vellore.
16. **Dr AUROBINDO MITRA,** Mohali.
17. **Dr NISHA NIGIL,** Ernakulum.
18. **Dr GS PANDEY,** Jabalpur.
19. **Dr BIJOY PATRA,** Delhi.
20. **Dr PRAVEEN R,** Meerut.
21. **Dr V MADHAVA RAO,** Kakinada.
22. **Dr VIJAYABHASKAR REDDY,** Pondicherry.
23. **Dr VIJAYA HA SARATHI,** Mumbai.
24. **Dr SIVAN ARUL SELVAN,** Vellore.
25. **Dr RAJNI SHARMA,** Delhi.

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* **Bone age** assessment: requires an X-ray of the left hand, and should be done using **Greulich & Pyle** atlas or the **Tanner Whitehouse (TW3)** method. For quick assessment the following centers of ossification can be remembered:
– Capitate, hamate – 1 year,
– Lower end of radius – 2 years,
– Triquetral – 3 years,
– Lunate – 4 years
– Scaphoid – 5 years,
– Trapezium, trapezoid, lower end of ulna – 6 years,
– Pisiform – 12 years.

RICKETS

*In the last few years, there is resurgence of **vitamin D deficiency** rickets in developed *and* in developing countries. This is due to low skin exposure to sunlight (inadequate time spent out of doors); worsened by pollution and “fairness” creams.

***Adequate sunlight exposure** for infants is 30 min per week if only in a diaper, and 2 hr per week if fully clothed.

*A family history of consanguinity, short stature, orthopedic abnormalities, poor dentition and alopecia suggest **inherited rickets**.

***Vitamin D resistant rickets** type 2 presents in infancy with severe bony changes and high levels of calcitriol.

* When initiating treatment with Vitamin D, ensure adequate calcium intake.

* The earliest biochemical change after initiation of treatment is rise in serum phosphorus followed by calcium.

* Physical findings take 6m-1year to normalize.

* Hypercalcemia is more likely with oral doses than IM doses.

DIABETES MELLITUS

*The normal person has a basal level of insulin, with peaks of secretion following meals. This should be mimicked as far as possible while managing children with DM.

***Fixed combinations** of regular and intermediate acting insulin are not physiological, and not flexible, and **should not be used in children with type 1 DM.**

* **Rapid acting insulins** like lispro and aspart reach the blood 15 minutes after injection, peak in 30-90 min, and last for 3-4 hours. They can be injected just before meals and are useful for toddlers who may not be depended on to eat after the insulin has been given.

* Very long acting insulins (detemir and glargine) last for 12-24 hours, and are useful in addressing hypos but come at a cost.

* **Split mix regimens** use combinations of short (regular or short) and intermediate insulins. An example is short + intermediate in the morning, short before lunch, and short before dinner, with intermediate either given before dinner or at bed time.

* **Basal bolus regimens** use combinations of short (regular or short) and long acting insulins. The dose of the short acting insulin before each meal depends on the level of blood glucose (BG) at that time, based on a sliding scale and preferably taking the composition of the meal into account.

* Sites of insulin administration are abdomen, thighs, buttocks, and upper outer arm. Rotation of the exact spot within the same site should be taught to avoid lipohypertrophy.

* **Self monitoring of blood glucose (SMBG)** is essential in type 1 DM. Ideally it should be 4 times a day (before breakfast, lunch and dinner, and at bedtime) and 2-3 am twice a month.

* Extra snacks and plenty of fluids must be taken before and during **vigorous activities**. BG should be monitored carefully before, during, and after exercise (including at midnight).

* **Hypoglycemia**: Give 10-15 gram of oral carbohydrate - sugar (2-3 tsp), fruit juice (100-200 ml), honey (2-3 tsp), or 10 gm glucose powder. *Diet drinks are useless*. Chocolates, toffee and ice cream are also not useful as their fat content makes them low glycemic index foods. Additional sugar should be given if there is no response in 15 min. If there is severe vomiting, convulsions or unconsciousness, Inj. **Glucagon** (available from Novo Nordisk) should be given at home while organizing transport to hospital. The dose is 0.5mg in children below 6 years and 1 mg in older children. If there is no response, intravenous glucose is required.

* **Sick day rules** should be taught to all families. They must not omit insulin altogether during sick days; rather they should test BG frequently, and modify insulin doses accordingly.

* **Periodic follow up** (1-3 monthly) are a must, for assessing self-insulin dose adjustment based on SMBG; HbA1c; other issues; systematic screening for chronic complications (fundus, urinary microalbumin, blood pressure).

* Rigorous control of blood sugars will reduce these chronic complications.

OBESITY

* Differentiating pathologic and syndromic causes of obesity from simple obesity:
PATHOLOGIC OBESITY is characterized by
1. Short stature
2. Delayed puberty
3. Possible presence of mental retardation/ visual defects/ other stigmata

SIMPLE OBESITY is characterized by
1. Tall stature
2. Normal or advanced puberty
3. Normal mental development/ vision; No stigmata

* **Clinical predictors of future outcome** in simple obesity:
1. *Elevated BP*: Hypertension, coronary heart disease

2. *Acanthosis nigricans*: insulin resistance
3. *Tonsilar hypertrophy*: obstructive sleep apnea
4. *Goiter*: hypothyroidism
5. *Hepatomegaly*: Non-alcoholic fatty liver disease (NAFLD).

* When and what **investigations** are suggested in an obese child:
1. BMI > 95 percentile: fasting BG, lipid profile, ALT- repeat every 2 years.
2. BMI 85- 95 percentile: fasting lipids in all; BG in at risk children (family history of diabetes, acanthosis, polycystic ovarian syndrome or PCOS); ALT if suspecting NAFLD.
3. All suspected cases: thyroid function.

* **Dyslipidemia**: treatment with statins is recommended if the child is > 10 years of age; 6mo of dietary restriction and life style modification has not lowered LDL levels to below 190 mg/dl; or to below 160 mg/dl if family history of premature CVD or 2 or more other risk factors for CVD are present.

PRECOCIOUS PUBERTY

* The standard cut-off for early puberty remains 8 years in girls and 9 years in boys, though puberty is somewhat earlier in some groups of girls (e.g. African Americans).

* Central precocious puberty (CPP) is more common in girls but usually idiopathic. It is less common in boys but often (50%) due to CNS pathology like hypothalamic hamartoma (suspect if early age of onset & rapid progression).

* Axillary hair appears 1-1.5 years after pubic hair appears. Presence of pubic and axillary hair without breast development is likely to be early **adrenarche** (a normal variant).

* If adrenarche is unusually early, or there are signs of excessive virilisation like clitoromegaly and pigmentation, consider virilising form of CAH.

* In premature **thelarche**, if linear growth and skeletal maturation are not advanced, just follow up carefully.

* More than one sign of sexual maturation with accelerated growth velocity, physical growth and advanced bone age is indicative of CPP.

* Boys: examine testes – bilateral enlargement favors CPP. In PPP (e.g. CAH) testes are not enlarged.

* GnRH agonists are the treatment of choice for CPP. Cheaper alternatives like medroxy-progesterone acetate and cyproterone acetate do not slow down linear growth or skeletal maturation.

DELAYED PUBERTY

* Definition – no breast development by the age 13 years in girls; testicular volume <4ml by age 14 year in boys.

* Common causes are systemic illnesses and under-nutrition.

* Always think of CDGP, especially if family history of delayed puberty.

* Discordance of development, e.g. pubic hair development much advanced compared to testicular size, is indicative of a pathologic cause. In CDGP, development is concordant.

* Low dose testosterone (50 mg/ month for 3mo) may result in marked improvement (testicular volume, height spurt) in CDGP but not in hypo-gonadotrophic hypogonadism (HH).

* In suspected HH, MRI imaging of brain and pituitary is worthwhile to exclude the possibility of an intracranial lesion like craniopharyngioma.

* Functional HH is seen in malnutrition, hypothyroidism, growth hormone (GH) deficiency, and chronic illnesses.

DISORDERS OF SEX DEVELOPMENT

* If the gonad is palpable, it is likely to be a testis.

* If the uterus is present, gonads will be ovaries, ovotestes, or dysgenetic testes – not producing even mullarian inhibitory substance. If there is no uterus, the gonads are likely to be testes.

* Hyperpigmentation is due to ACTH hypersecretion and denotes forms of CAH, the commonest cause of ambiguous genitalia.

* In a sick child, think of adrenal insufficiency due to CAH.

* Among the DSD, females with CAH have the highest chance of being fertile.

* Look for dysmorphic features, which may lead to the diagnosis of a syndrome or a chromosomal anomaly.

* In an XY child, if sex or rearing is female, both gonads should be excised at the earliest, and replacement with estrogen started during adolescence.

* XX pure gonadal dysgenesis differs from other forms of gonadal dysgenesis in that it lacks somatic anomalies. These children have a female phenotype with mullarian structures fully developed, and present in puberty with hypergonado-tropic primary amenorrhea.

* Men with 5 α reductase deficiency do not have gynecomastia, while those with androgen insensitivity syndrome do develop gynecomastia and pubic hair during puberty.

* Virilized babies with 46 XX karyotype should preferably be raised as females, while 46XY children with complete androgen insensitivity should be raised as females, and gonads removed.

PRADER – WILLI SYNDROME

* Genetic disorder in which 7 genes on the *paternal chromosome 15* are missing (q 11-13 partial deletion). Deletion of the same region on the maternal chromosome produces Angelman syndrome.

* Characteristic features are hypotonia, short stature, polyphagia, obesity, hypogonadism, mild mental retardation, small hands and feet. It may be misdiagnosed as Down syndrome.

* **GH therapy** may be considered, as it supports linear growth, increases muscle mass, and lessens hyperphagia and weight gain to some extent.

* Throughout life, the subject's food should be kept "under lock and key".

HIRSUTISM

* The term refers to excess growth of male pattern terminal hair in women, and implies abnormal androgen action.

* Pubertal androgens promote the conversion of vellous hairs to coarser, pigmented, terminal hairs.

* Excess of vellous hair – **hyper-trichosis** – should not be confused with hirsutism. Hirsutism denotes hyper-androgenism; hypertrichosis involves

non-androgenic hair, and can be due to porphyria, drugs like phenytoin, minoxidil, diazoxide, penicillamine etc.

* Androgen independent terminal hairs are on the scalp, eyebrows, eye lashes.

* Dihydrotestosterone is the androgen that acts on hair follicles and responsible for the formation of terminal hair.

* Hirsutism in prepubertal children is a sign of precocious puberty, since development of pubic hair depends on adrenal androgens – CAH should be suspected.

* In pubertal females PCOS is the commonest cause; or due to CAH, or idiopathic.

* In rapidly worsening hirsutism, or changes of marked hyperandrogenism (temporal hair recession, voice change, muscular development, clitoromegaly, psychological changes, irregular menses), rule out an androgen secreting tumor.

* Drug induced (glucocorticoid) Cushing syndrome usually does not have hirsutism, since androgenic activity is poor. Rather there is hypertrichosis due to excess vellous hair growth.

* Hirsutism with clinical picture of Cushing syndrome suggests an endogenous origin – either pituitary or adrenal tumor producing cortisol and androgen.

* Very high levels of serum testosterone are indicative of adrenal or ovarian tumor. DHEAS is synthesized exclusively from adrenal cortex so elevation of both testosterone and DHEAS indicates adrenal pathology.

* Glucocorticoids will suppress ACTH dependant adrenal androgen synthesis. Oral contraceptive pills suppress ovarian androgen synthesis. Spironolactone blocks androgen receptors. Finasteride (5α reductase inhibitor) is useful but there is a risk of ambiguous genitalia in male fetuses if exposed in the first trimester.

MENSTRUAL ABNORMALITIES

* **PCOS** may present with menstrual abnormalities, infertility, miscarriages, or even primary amenorrhea.

* PCOS is suspected if there are clinical features of insulin resistance (acanthosis nigricans and obesity) and androgen excess (hirsutism, acne, male pattern baldness). Serum LH tends to be elevated, and FSH low.

* Mild symptoms of hyperandrogenism – acne or hyperseborrhea – are frequent in adolescent girls and are often associated with irregular menstrual cycles. In most instances, these are transient and only reflect the immaturity of the hormonal system during the first years following menarche.

* Women with PCOS are at risk for type 2 DM, dyslipidemia, stroke, coronary heart diseases, endometrial carcinoma.

Pre-PEDICON Workshop & PEDICON Programs: Bangalore, January 2009

Vaman Khadilkar, Pune & M Vijayakumar, Calicut

The **Preconference Workshop** was organized by Dr P Raghupathy at Sagar Hospital, Bangalore, on 21st Jan 2009. Dr Sudha Rao discussed practical aspects of assessment of growth and puberty. Dr VV Khadilkar gave useful tips for managing children with short stature, and some points regarding growth hormone therapy. He also gave a lecture on management of neonates/ children born with uncertain sex. Dr Meena Desai discussed the approach to congenital hypothyroidism. Dr V Bhatia discussed the clinical features and management of a child with rickets. Dr Vijayakumar discussed parent education in the home management of type 1 diabetes mellitus. Finally, Dr Raghupathy and Dr Ahila presented interesting cases for discussion.

A **Symposium on Short stature** was conducted on 24th January by Dr Vaman Khadilkar. He showed how to plot distance, velocity, SMR and proportion charts using animated pictures of growth charts. Other experts were Drs Sukanta Chatterjee, Madhuri Kulkarni, Shabina Ahmed and Sudha Rao. Topics discussed were: Which growth charts to use; How to apply distance and velocity charts; ICP model; Psychological aspects of short stature; Growth hormone stimulation tests; Algorithm for short stature and approach to short stature. Audience participation at the end was particularly good and very interactive, with the session being extended by 25 min due to overwhelming demand from the audience.

The **Chapter Symposium on Pediatric & Adolescent Endocrinology** was moderated by Dr VV Khadilkar on 25th January. The experts here were Dr Vijayakumar (prevalence, etiology, clinical features, approach to obesity), Dr S Rao (etiology, clinical features, approach, management of hirsutism), Dr A Arya (management of menstrual disorders), Dr Khadilkar (approach to delayed puberty in boys) and Dr A Seth (precocious puberty in girls). Representative cases were discussed in each talk. After 60 min of talks, 30 min were devoted to an interactive session.

6th Annual Conference of Indian Thyroid Society

Lt Col J Muthukrishnan, Chandigarh

The Pre ITSCON Workshop on 'Thyroid Imaging' on 6 March 2009 at Medwin Hospital, Hyderabad, started with an update on nuclear imaging in thyroid disorders. The importance of radioiodine in the diagnosis of thyroid organification defects (dyshormonogenesis) was emphasized. Dr Pradhan (SGPGI), speaking on Technetium 99m-pertechnate, highlighted its efficacy being comparable efficacy to I^{123}, and the advantages of short half life and low radiation dose. An interesting learning point was that the absence of uptake in the thyroid area, along with that in salivary glands and gastric mucosa, can suggest sodium Iodide symporter (NIS) defect.

The ultrasound (US) workshop discussed normal findings of thyroid US and a standardized reporting format. US characteristics of thyroid nodules suggestive of malignancy – greater vertical than horizontal dimension, irregular margins, hypo-echogenicity, presence of micro-calcifications and greater intranodular vascularity – were highlighted.

The role of doppler studies of intrathyroidal vascularity and inferior thyroid artery peak systolic velocity (ITAPSV) in differentiation of thyrotoxic states was discussed by Dr KD Modi. Studies showing greater inferior thyroid artery PSV correlating with greater thyroid activity and

higher anti-thyroid drug (ATD) requirement in Graves' disease (GD) were presented. A clinically relevant study on the role of Doppler in differentiating thyroiditis from Graves' disease in pregnant women was well received. In the setting of pregnancy where clinical findings are confusing, radioisotope scans contraindicated, and TSHRAb not freely available, Doppler can be a safe, handy and inexpensive tool. An ITA PSV > 40 cm/s in the relevant clinical and biochemical setting is highly suggestive of thyrotoxicosis due to GD rather than thyroiditis. Possible application of this modality in follow up of GD patients on ATD, to assess recovery of normal thyroid activity which can help in decision making on ATD withdrawal, was discussed.

MY HIMACHAL DIARY

Margaret Zacharin, Melbourne, Australia

Dr Sahul Bharti was the first trainee in our pediatric endocrinology certificate course at SGPGI. A department could not have asked for a more exemplary trainee with whom to flag off its fledgling training program. He now combines a career in community medicine and pediatric endocrinology. Below is an account of some of Dr Margaret Zacharin's experiences in "Sahul's village"- V Bhatia.

For my first visit to the Himachal, I was introduced to Dr Bhavneet Bharti by Prof Vijayalakshmi Bhatia. What good luck that turned out to be! We set off early in a hospital taxi with a GOOD driver – thankfully, given the precipitous cliff faces at every corner! The road to Sahul's village took about 7 hours, often at a snail's pace with spectacular views of the Himalayan foothills. We stayed at Sahul's tiny hospital house, with dinner served on the floor mat, the only furniture apart from a bed. Nothing but a Gandhian outlook could withstand the challenge of living for years in spartan circumstances in a tiny house, tending enormous numbers of patients in a constant stream. Bhavneet's extraordinary efficiency, dedication, and her own convictions, must enable him to continue.

We saw about 80 patients on the first day, outside, at a small table. All comers were seen in strictest order with no attention paid to anyone who dared to intimate some exclusive right. When a public statement seemed appropriate, such as for management of Vitamin D or iron deficiency, Sahul raised his voice and created a small public lecture, audible to all the waiting public.

We later took off for several hours drive around spectacular mountain roads to the village Panyiali. It is spartan, with a water source frequented by all the local cattle and in which all ablutions are performed, despite the fact that the water is then sold to other less fortunate villages further down the mountain! Attempts made by Bhavneet to fence off the area and so improve the local health have not succeeded.

The evening was prolonged, with many "health" songs created by Sahul and taught to local boys, who also provided a basic musical background with harmonium and drum. The HIV prevention message was extremely well known and sung with religious gusto, but the translation into safe sexual practices is possibly less enthusiastic.

Dinner unfortunately may also not have been of the most perfect sterility, as I was violently ill most of the next day. This was a particular problem because we had to attend a school performance of more health songs and the presentation to a newly-wed couple of her "medical dowry" or as Bhavneet would prefer, "medical legacy". This was an iron cooking pot containing an iodine testing kit, iodized salt, condoms, OCP and a few other life essentials. I had to rush behind a bush just before the crucial presentation moment, but fortunately was able to stand up for long enough to be (I hope) slightly gracious! Full recovery took place extraordinarily rapidly, after firm administration by Sahul of anti emetic and a bright yellow pill.

We duly returned to Chandigarh and Sahul to his patients. All told, it was an experience that I could never have envisioned and one that most colleagues would do well to emulate in spirit, if not in replication.

Part II (6 months later):
Sahul hatched a plan that we should return together with my husband, John, an orthopedic surgeon, to educate villagers, undertaking teaching sessions for the medical "boys" he has previously trained. In late September 2008, John was received with all due Lucknowian courtesies before taking the night train to Chandigarh. He did have enough time to realize, even in the first 24 hours, that Indian hospitality is legendary, people are wonderful and that his previous impressions gained from a tour through Rajasthan with four small children in tow, were clearly mistaken.

Our sleeper carriage conveyed us to Chandigarh where we were picked up by an excited Sahul, ready for the village intervention! After 7 hours along precipitous mountain roads in the Himalayan foothills, we were greeted at Paniyali by all the volunteer boys of the previous visit and with garlands of fresh chrysanthemums. John was so overwhelmed by the leys that he didn't want to take his off at all.

Over the next week the idea was to undertake teaching of volunteers, school students, and sometimes interested villagers, in the essentials of acute trauma management and the basics of reproductive health for girls and women. Since Sahul left the village, after 5 years living and working from Paniyali and Sangrah, another village with a small hospital, there has been no doctor at all in the region. An unfortunate young

dentist, on his first (2 year) posting, has become the surrogate doctor, his only training being 6 months sitting with Sahul before he left. The poor man has to deliver infants, sew up wounds, deal with any and all emergencies…

The first evening introduction included a puppet show by Anandita (Sahul and Bhavneet's 9 year old) teaching the audience not to apply hot chillies to cuts and dog bites! John gave fantastic basic student level talks and demonstrations on acute assessment of the trauma victim, airway management and log-rolling, followed by specific limb management in detail. He used Anandita as the model. She is now wedded to him as a result, having been rolled, plastered and bandaged repeatedly and kept asking her parents which of us they preferred!

On the first day we were graced by the presence of an elderly local bone setter who had travelled miles for educational purposes. Sahul was astonished, as this was the first time in all his years there that a local practitioner had deigned to join or interact with any of his communal efforts for education. The man showed John his techniques and was most interested and absorbed in learning fracture reduction methods. We used plaster back slabs and were careful to advise about swelling, vascular occlusion and elevation.

We then split into boys' and girls' groups. Bhavneet and I talked about menstruation, dysmenorrhoea, vaginal discharge, STDs, contraception and HRT for early menopause. The hit of the session was an impassioned speech by Bhavneet on how to choose a husband (and who not to choose). I nodded sagely but actually ended up having a firm idea of the nature of questions even without a Hindi translation. Both groups received several iodization of salt and vitamin D talks. Himachal villagers can still obtain local salt which is iodine deficient but significantly cheaper.

This type of activity took place each day, sometimes with a long walk down more precipitous cliffs, to access a village, or climb to a school. Each place was different, with a range from educated adolescents to nutritionally deficient and emaciated older people. Welcome was always warm and interest sustained by all.

One particularly pleasant afternoon and evening was spent on a roof in a village, teaching the volunteers how to suture. They were far more apt than any medical student I have ever taught, needing only one demonstration to master the technique of using no touch, together with forceps and needle holder. In minutes they tied several knots, pulled sutures out and then taught the next in line!!
One afternoon we returned to Paniyali, too late to climb hundreds of meters up the hill to a goddess' temple. Sahul was delirious with joy to discover that it was indeed an auspicious day because, lo and behold, the goddess had descended by sheer chance, wrapped in an orange sari, on the back of her guru, to grace the village! This was cause for a whole night's celebration from 7pm-2am. We joined in, had sacred ash smeared on our foreheads as blessing from the goddess, clapped in the absence of being able to express ourselves in Hindi, and eventually danced, in imitation of Shiva.

After return to Chandigarh, Sahul became reflective. He now worries that his 5 years in the wilds may have actually worsened the lot of the local community members, by exposing them to knowledge and thus to worry. He illustrated this delightfully by asking whether it was better to have a small "thing" in the head, to have an occasional seizure and to live in blissful ignorance or to have had an MRI and to know that one had cerebral cysticercosis, with a worm wandering about somewhere inside one's head.

Three weeks after we left the Himachal, a major road accident left 5 people in extremis. The trained volunteers rescued them, relocated and straightened limbs, sutured wounds and transferred them to a local hospital several hundred kilometers away. Much to the astonishment of the hospital staff, they were said to be in remarkable condition. The boys were duly congratulated and awarded some recognition of their work. This event has, I hope provided them with a sense of value and fulfillment, enabling ongoing efforts.

For ourselves, we are incredibly grateful to Sahul and Bhavneet for trusting us to assist them in their work and allowing us the honor of giving a little time and knowledge. We feel it is the most valuable and rewarding activity of many years and both look forward to returning again. Their work is of the highest order and deserving not only of praise but of emulation.

[Editor's note: ISPAE is proud to be associated with Sahul's efforts. In keeping with our mandate to help the needy, in 2008, ISPAE's Executive donated Rs 15,000 to Sahul's efforts, and two members also independently donated Rs 5000/- each towards his efforts in Paniyali].

NEWS YOU CAN USE

Orchidometers (see picture above) and **Growth Charts** based on Agarwal data, can be purchased from ISPAE. Contact Dr V Bhatia, vbhatia@sgpgi.ac.in. The orchidometer costs Rs 1000, whereas the orchidometers from Holtain costs about Rs 7000; the growth charts cost Rs 50 for 100 sheets.

Alert from The Endocrine Society: on PTU use in Children: April 13, 2009

The Letter to the Editor in this week's New England Journal of Medicine by Drs. Rivkees and Mattison highlights concern about potential severe liver disease in children from the commonly used antithyroid drug, propylthiouracil (PTU), an adverse effect not seen with the other thionamide derivative, methimazole. On the basis of several lines of evidence and frequency estimates some of which were presented at the National Institute of Child Health and Human Development workshop, "Hepatic Toxicity Following Treatment for Pediatric Graves' Disease" on October 28, 2008, these authors suggest that PTU no longer be used as first-line treatment for Graves' disease in the pediatric population.

The Endocrine Society endorses this recommendation. Despite the relative rarity of Graves' disease in the young, children and adolescents account for as many as 13 of 42 cases of serious PTU-related liver failure reported to date in the medical literature and a similar disproportionate number (4 of 13) of those requiring liver transplant for this indication between 1990-2002. Although precise numbers are not known with certainty, it can be estimated that there are 4,000 children treated each year for Graves' disease in the United States. If 40% are treated with PTU, then as many as 1-2 children a year could develop severe liver disease, with some requiring a liver transplant or potentially suffering a fatal outcome.

Even one excess death is too many if it can be prevented. Until data from more thorough prospective studies or peer-reviewed retrospective studies become available, it would seem reasonable to use methimazole preferentially in the pediatric population.

For further information, please contact Stephanie Kutler, Director, Government Affairs, at skutler@endo-society.org.

References:
Rivkees SA, Mattison DR Ending propylthiouracil-induced liver failure in children. N Engl J Med 2009;360:1574-5.
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Russo MW, Galanko JA, Shrestha R et al. Liver transplantation for acute liver failure from drug induced liver injury in the United States. Liver Transplantation 2004;10:1018-23.

Biennial Meeting of ISPAE

November 13th -15th 2009: India Habitat Center, New Delhi.

International Faculty:

Dr Jean-Claude Carel, France | Dr Francesco Chiarelli, Italy | Dr Pik To Cheung, Hong Kong
Dr Maria Craig, Australia | Dr Francis deZerger, Belgium | Dr Zeev Hochberg, Israel
Dr RK Menon, USA | Dr Olle Soder, Sweden | Dr Margaret Zacharin, Australia

Registration Fee (INR)

Category	Till 30.09.09	After 30.09.09
Delegates	3000	4000
ISPAE Members	2000	3000
Students	1500	2000
Accompanying persons	2000	2000
Single day (15.11.09)	1000	1500
International delegates	US$125	US$150

ISPAE- PET 2009

New Delhi, 11th-13th November 2009: In collaboration with ESPE & APPES

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PET-2009 is a 3 day residential, intensive (3:1 participant-faculty ratio) training program in pediatric endocrinology, aiming to provide young entrants in the field of pediatric endocrinology clinical training and opportunities for long term mentoring; and encourage research in the field. Faculty include Drs Jean-Claude Carel (*Paris*), Pik To Cheung (*Hong Kong)*, Maria Craig (*Sydney*), Ram Menon (*Michigan*), Olle Soder (*Stockholm*), Margaret Zacharin (*Melbourne*), V Bhatia (Lucknow), MP Desai (Mumbai), PSN Menon (Kuwait), P Raghupathy (Bangalore), N Shah (Mumbai). Participants will be selected. The last date for receipt of applications is **30th May 2009**. For application procedure, please check website: www.ispae.org.in

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