Encouraging Innovation in Medicine

The IIT Mumbai recently held a tech fest. It was an extraordinary opportunity for engineering students from around the country to participate in diverse competitions like making robots, harnessing renewable sources of energy, designing ecofriendly houses, building boats that run on solar power and making machines out of junkyard scrap. Most good engineering institutes have this kind of technical festival, apart from the cultural festivals which medical colleges also hold.

My plea is that we need to have some kind of parallel in medical institutes to foster a sense of innovation and creativity in medical students which is systematically crushed during the years in a medical school. If we encourage our students to innovate we are sure to discover better and cheaper ways to practice medicine. It could be simple things like an easier way to collect urine in a newborn, or take the temperature or to auscultate heart sounds. Not everything in medicine needs FDA approval or long drawn out clinical trials.

Efficiency isn't everything and we must learn to cultivate creativity(1).

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Hypomelanosis of Ito with Tessellated Fundus and Polymicrogyria

Hypomelanosis of Ito appears to be the third most common neurocutaneous disease after neurofibromatosis and tuberous sclerosis. The bizarre, patterned, hypopigmented macules usually appear during the first year of life or at birth in sharply demarcated whorls, patches or streaks that follow the lines of Blaschko. The lesions appear as a negative image of incontinentia pigmenti. Multiple extracutaneous abnormalities involving the nervous system, eyes, musculoskeletal, hair, head, face, dental, cardiovascular, genito-urinary system and other organ anomalies can occur in most of the patients. We report an interesting case of Hypomelanosis of Ito with tessellated fundus and polymicrogyria.

A 4 years old male child was brought with recurrent episodes of generalized tonic clonic seizures since 8 months of age. There was global developmental delay, hypotonia and mental retardation. On examination, multiple whorled like hypopigmented macules were present over abdomen, chest, back and both lower limbs arranged along the lines of Blaschko since birth (***Fig.* 1**). The palms, soles and mucous membrane were spared. The fundus showed pale disc, tortous vessels around the disc, radial patchy streaks of hypopigmentation and tessellated background (***Fig.* 2**). EEG showed generalized epileptiform discharges. CT and MRI scan brain showed hemispheric asymmetry with atrophy of right cerebral hemisphere and ballooning of right lateral ventricle. MRI brain demonstrated polymicrogyria at right perisylvian and parietal region, thinning of corpus callosum and periventricular hyperintense signal.

Classical tessellated fundus in Hypomelanosis of Ito has been reported only in two children in literature(1). Also, there are very few reports about polymicrogyria in Hypomelanosis of Ito(2,3).

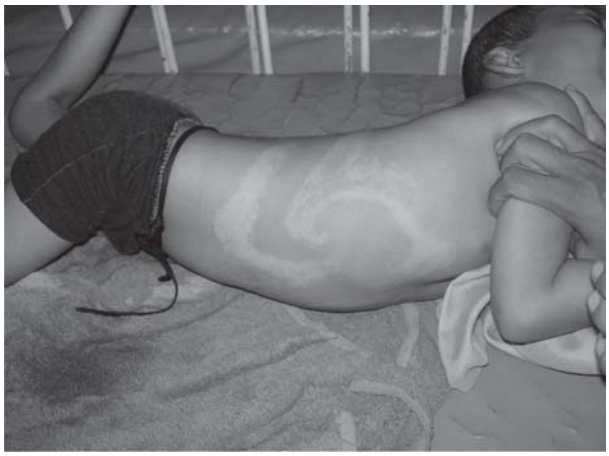

FIG.1 *A child with Hypomelanosis of Ito showing multiple whorled like hypopigmented lesions present over abdomen, chest and back.*

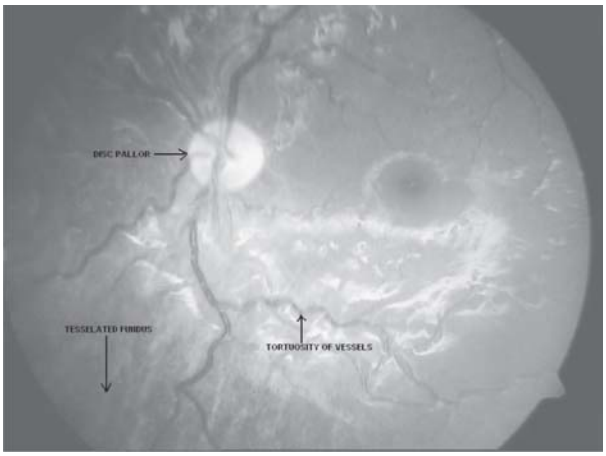

FIG.2 *Fundus showing pale disc, tortous vessels around the disc, radial patchy streaks of hypopig-mentation and tessellated background.*

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Familial Woolly Hair Disease

A five year old male presented with progressive curling of scalp hair since one year of age. It was a full term product of a non consanguineous marriage with no known or distant African ancestary. Child had a normal motor development; however, speech was delayed and he encountered learning difficulties once he was admitted to school at the age of three years. None of the other family members had similar hair type.

On examination, the hair all over the scalp were found to be tightly coiled (curl diameter being ~ .5 cm), thin, dry, brittle, hypopigmented and sparse. The eyebrows were also sparse (***Fig.* 1**). Underlying scalp was normal. Nutritional status was normal. Other ectodermal tissues viz. nails, skin, eye were normal. There was no other apparent congenital abnormality. Systemic examination was normal. Microscopic examination of hair revealed axial rotation of hair shaft. Echocardiography did not reveal any evidence of cardiomyopathy.

Woolly hair syndrome is a rare congenital abnormalities of scalp hair described in Asian and Caucasians. It is characterized by tightly coiled hair involving the entire or part of scalp in an individual of non Negroid origin. It manifests either at birth or