NEWS IN BRIEF

BPaL: Game Changer in XDR TB

Extensively Drug-resistant (XDR) tuberculosis is defined when mycobacteria are resistant to Isoniazid (INH), Rifampicin, the fluoroquinolones and at least one of the injectable second-line drugs such as aminoglycosides. It leaves you with no tool to handle a deadly opponent. Treating XDR tuberculosis meant five more drugs – several of them injectable – and for prolonged periods up to 2 years. Survival was between 20-30%. However when bedaquilone was introduced, combined with linezolid, the survival improved to 65%. And now, the FDA has approved a 3-drug, oral, 6-month protocol called BPaL, which has drastically improved survival to 89%. BPaL includes the new kid on the block – Pretomanid along with Bedaquilone and Linezolid.

Pretomanid kills actively-multiplying mycobacteria by inhibiting mycolic acid synthesis in the cell wall. It also kills non-replicating mycobacteria following nitric-oxide release. The drug was approved after the Nix-TB trial where 109 patients with XDR TB in South Africa received pretomanid with bedaquilone and linazolid. Pretomanid was used in a dose of 200 mg daily for 6 months. Bedaquilone was prescribed daily 400 mg for 2 weeks and then tapered to 200 mg thrice a week for the remaining 6 months. Linezolid was prescribed 1200 mg daily for 6 months. The major side effect was peripheral neuropathy due to linezolid seen in 69% patients. Side effects due to pretomanid, which have been seen in animal toxicity studies, include lens abnormalities, testicular toxicity, seizures and QTc prolongation.

Pretomanid is a ray of hope on the bleak horizon of XDR tuberculosis. We need to prescribe it responsibly so that resistance to this does not develop.

(*https://www.tballiance.org/news/fda-approves-new-treatment-highly-drug-resistant-forms-tuberculosis*)

Social Prescribing

Every wise doctor knows that the causes of ill-health are complex. There are often social problems that precipitate and perpetuate ill-health. It is estimated that about 20% referrals to a general practitioner are due to social causes. In the UK, the NHS has now decided to fund a unique program called social prescribing. It is also called community referral. Here primary care physicians who feel their patient needs emotional, social or practical support, refer the patient to a link worker. The link worker is associated with a wide range of voluntary, local community service groups. These can include hobby groups like singing, dancing, cooking or gardening, volunteering in community projects, and giving legal help. Link workers need to have a strong knowledge of the local community and have creative ways of matching the jigsaw of skills and needs of both patients and volunteers.

A review by the University of Westminster found that social prescribing resulted in a 28% drop in General Practitioner visits and a 24% reduction in visits to the emergency room in those patients who had received a social prescription.

It is a truth that less-recognized socioeconomic factors have more impact on health than healthcare itself. Yet we chose to ignore these simpler solutions lost in the glamour of hardcore medicine. (*BMJ 2019;364:l1285*)

The New Medicine of Climate Change

As the world heats up, the vocabulary of medicine is changing. New words are being coined to address new diseases. An article in the NEJM discusses Chronic kidney disease of unknown etiology (CKDu), a kind of chronic kidney disease suspected to be a heat stress nephropathy because of rapidly changing environmental conditions.

CKDu was first described in South American agricultural workers who started dying from irreversible renal failure in unexpectedly large numbers. Similar patients are now being seen from many countries, including India. It is now the second leading cause of death in Nicaragua and El Salvador. Sugarcane workers in South America who worked in unusually hot and humid environments have been the focus of intense research. It is hypothesized that daily heat exposure results in ischemia and heat-induced oxidative stress. Poverty, heavy metal exposure and agrochemicals may also be adding to the problem.

It is estimated that 125 million people were exposed to heat waves between 2000-2006. CKDu is merely one of many heat-sensitive illnesses, which are likely to emerge as temperatures cross our physiological abilities to compensate. (*N Engl J Med. 2019;381:693-6*)

Tamil Nadu Bans Sex Reassignment Surgery

A Government order released by the Tamil Nadu Government has banned sex reassignment surgeries in infants and children, except in medical emergencies. The order came after a judgment by Justice Swaminathan of the Madurai Bench of the Madras High Court. It was in answer to a petition filed by a transwoman and her husband who were making a plea to the authorities to register their marriage.

The judgment wants to highlight many key ideas. The narrow view of gender being merely binary, *i.e.*, male or female, needs to be changed. Intersex individuals have complex physical, hormonal and genetic underpinnings to their gender identities that need to be understood. Ambiguous genitalia at birth pressurize parents to quickly pick a gender. The infant is then subjected to surgeries, which may cause physical trauma, emotional turmoil and later confusion about gender identity. This is because the sexual identity of the child is a complicated process, which the child picks up while growing up. The WHO has also said that such sex normalizing surgeries are often medically unnecessary and often irreversible.

The court has decreed that the consent of the parent does not necessarily mean consent of the child. The decision to undertake sex assignment surgeries must be taken after consultation with a team comprising a pediatric surgeon/ urologist, endocrinologist, social worker/ intersex activist and a government representative. There are no easy answers to this complex problem. It appears that the simplistic narrative of male or female is being questioned and relooked at with a more compassionate eye. (*The Hindu 8 September 2019*)

Gouri Rao Passi
gouripassi@gmail.com