

Disease Pattern in India

PUO

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I would like to stress that before thinking of uncommon causes of PUO (Pyrexia of Unknown Origin), common causes like Typhoid group of fevers, Tuberculosis and HIV infections must be excluded.

One third cases of PUO turn out to be due to some infection, one third are due to auto-immune diseases and remaining one third are due to neoplasms including lymphomas.

I would like to stress that the most important strategy to pick up a cause of PUO is to do a full general examination of the patient every 2-3 days and repeat some tests like CBC, blood culture and a chest X-ray after a week or two. In addition, there are three important investigations, which must be carried out in every case of PUO, before labeling the patient as "undiagnosed PUO". (Only in 10-15% of the patients, the cause cannot be found.)

These investigations are-

1. Imaging-CT Scan of the chest and abdomen including pelvis must be

done in all patients to pick up lymphomas, tuberculosis, infected gall-bladder, sub-phrenic abscess, pelvic infection, etc. In fact, PET-CT Scan is a very useful investigation, where the hot area draws attention of the physician to investigate further as appropriately required and then the cause of the fever may be arrived at.

2. Bone marrow Examination- Marrow aspirate/biopsy is a very useful investigation to pick up military tuberculosis, multiple myeloma, various leukaemias and myelo-proliferative disorders as the cause of fever. Also culture of the marrow for tuberculosis, fungus and Brucellosis will help.

3. Infective Endocarditis- This infection is very easily missed. To pick up the vegetations on the valves, the best test is TEE (trans oesophageal echocardiography) and not 2-D Echocardiography.

Closed loop control for type 1 diabetes

Hovorka and colleagues compare the safety and efficacy of overnight closed loop insulin delivery with conventional insulin pumps in adults with type 1 diabetes. Automated closed loop control, known as an "artificial pancreas," has the potential to greatly improve the health and lives of people with type 1 diabetes.

With the advent of minimally invasive subcutaneous continuous glucose monitoring, research and drug company efforts have been focused on the development of subcutaneous artificial pancreas systems. These systems link a continuous glucose monitor and a subcutaneous insulin infusion pump via a control algorithm.

As such, the study is a clear advance in the quest for an ambulatory artificial pancreas.

Boris Kovatchev, BMJ 2011;342:883