Salt Restriction in Ascites with Cirrhosis of Liver: Will Enhanced Salt Restriction Increase Longevity?

Sir,

Presence of ascites increases the risk of minor complications - hernia, diminished mobility, dyspnoea and major ones such as renal failure, hepatorenal syndrome, spontaneous bacterial peritonitis, hepatic hydrothorax or variceal bleeding. Furthermore, treatment of ascites can also cause complications - electrolyte imbalance, encephalopathy, gynaecomastia (diuretic therapy), decreasing complement and opsonic activity (large volume paracentesis with albumin), deterioration of liver function and/or encephalopathy, shunt occlusion (transjugular intrahepatic portosystemic shunts (TIPS) or shunt surgery), disseminated intravascular coagulation, shunt occlusion, sepsis, (peritoneovenous shunt), operative mortality and morbidity, with lifelong immunosuppressive therapy (liver transplantation).

Since presence of ascites as well as its treatment, increases the risk of complications, attempt should be made to prevent ascites formation and its recurrence.

Salt restriction in diet is the initial and vital step in the management of ascites in cirrhosis of liver. A negative sodium balance is not easy to achieve unless strict salt restriction is emphasized by the physician and followed by the patient. Recommendations for salt restriction markedly vary: 2g salt (NaCl): (0.8g = 35 mmol sodium), 2g (88 mmol) sodium, 0.5g (22 mmol) sodium per day (1 – 3). Such marked variations (22 – 88 mmol per day) in sodium intake, allow ingestion of much greater amount of salt, resulting in recurrence of ascites. This arbitrarily decided value of 2g sodium or salt while effective in some patients to control ascites, may be responsible for the recurrence of ascites in several patients with Child C cirrhosis.

Our recent observation of absence of ascites in Child C cirrhosis (Child-Pugh score 11: albumin < 2.8 g/dl, bilirubin > 3 mg/dl; prothrombin time: more than 6 secs difference; no ascites, no encephalopathy), with enhanced salt restriction in them (unpublished), indicates strict salt restriction should be widely practiced. The patients were instructed, not to add salt in the diet and take food with low sodium content, to reduce intake to less than 2g salt. Patients when admitted for haematemesis, were administered minimal amount of parenteral saline, to reduce the chance of ascites formation.

A salt restriction of less than 2 g per day will impair the quality of life of some cirrhotic patient due to diminished food intake. However the patients were explained the advantages of diminished cost (fewer blood tests, admissions) and perhaps improved longevity.

With TIPS or shunt surgery, ascites is controlled but longevity is not increased as shunt surgery results in deterioration of liver function test and/or increases the chance of encephalopathy. In contrast, strict salt restriction aids control of ascites, without causing any deleterious effect on liver.

Every Child C cirrhosis patient with persistent or recurrent ascites should be offered an alternative of strict salt restriction rather than 2 g salt intake. In a cirrhotic patient with ascites, liver transplantation improves longevity but it is an option available to a few patients because of its cost, limited organ (cadaver or living related) and competent surgeons availability. Enhanced salt restriction is the only alternative available to the vast majority of cirrhotic patients with ascites in developing countries, to reduce hospital admission and cost and perhaps to improve their longevity. The need for clinical trials, to observe longevity in Child C cirrhosis patients, with 2g salt or less intake, is obvious.

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REFERENCES

Bilateral Adrenal Metastases from Large Cell Carcinoma of Lung in a Female Non-smoker Patient

Sir,

Bronchogenic carcinoma commonly metastasizes in liver, bone and brain. Besides the above structures, the kidneys, adrenal glands and the skin are the important sites of metastases. Adrenal gland involvement may be unilateral or bilateral.1

A female patient aged 46, staying in the rural area of Midnapur, West Bengal, presented with pain in the back of right lower part of chest for three months, occasional fever for one month and bilateral upper abdominal pain for one month. On clinical examination, the patient was conscious, cooperative and alert. Vital parameters were normal. She had moderate anaemia, no clubbing, skin-pigmentation or lymphadenopathy. The intensity of

breath sounds were reduced in the right infrascapular area with a dull percussion note on respiratory examination. Abdominal examination revealed no hepatosplenomegaly or ascites. Cardiovascular and neurological examinations were normal.

X-ray chest PA view and right lateral view showed a round, homogenous opacity with smooth margin in the posterior aspect of right lower zone. Ultrasound of thorax revealed no fluid. CT guided fine needle aspiration cytology showed evidence for a large cell carcinoma of lung. CT guided fine needle aspiration cytology of tumour in adrenal glands showed evidence of metastases. The cytology material had no fungi on PAS stain examination.

The patient was diagnosed as bronchogenic carcinoma, large cell type with bilateral adrenal metastases.

We report this case of bilateral adrenal metastases from lung cancer to emphasize that CT guided fine needle aspiration cytology of lung and CT guided fine needle aspiration cytology of adrenal gland are of
immense value in diagnosing this rare condition in living individuals. Most patients of adrenal metastases may be asymptomatic and are generally diagnosed at autopsy.

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REFERENCES

**Idiopathic Clubbing**

Sir,

Although finger clubbing is relatively innocuous, yet it is important because of its frequent association with significant underlying disease. The major conditions associated with clubbing and hypertrophic osteoarthropathy are: pulmonary diseases (75-80%), cardiovascular abnormalities (10-15%), diseases of the liver and gastrointestinal tract (5-15%) and miscellaneous disorders (5-15%).1 Finger clubbing may also occur rarely without evidence of underlying disease, in an idiopathic or primary form.

A 25 years male nursing assistant in the Indian Army presented with the chief complaint of bulbous swelling of all fingers and toes since one and a half years. This swelling was painless, except for some discomfort during the winter months, and gradually progressive. There was no history of palpitations, chest pain, syncope, ankle swelling, cyanosis, or any gastrointestinal complaints. He was a non-smoker and did not consume alcohol. There was no past history of any major illness. There was no family history of clubbing.

On examination, his pulse was 72/min, respiratory rate 16/min, and blood pressure 120/70 mm Hg. There was no pallor, cyanosis, icterus, or lymphadenopathy. Clubbing was present in all the fingers and toes with a drumstick appearance (Fig. 1). There was no swelling or tenderness of the wrists, elbows, ankles or knees. There was no thickening of the skin over the arms or legs. The systemic examination was normal. On investigation, his blood counts and biochemical parameters were within normal limits. Chest radiograph, electrocardiogram and spirometry were normal. Two-dimensional echocardiography did not reveal any intracardiac shunt. High resolution computerized tomography of thorax showed no evidence of any diffuse or localized parenchymal disease. A radiograph of the wrists and hands showed no evidence of periostitis or new bone formation. His thyroid and liver function tests were normal. The serum tests for RA factor and anti-dsDNA were negative. As no cause of the clubbing could be found, a diagnosis of idiopathic clubbing was made.

Primary or idiopathic clubbing, though rare, has been reported in literature.2,3 Primary or idiopathic clubbing can be of two types: a) Hereditary or familial form, b) Associated with pachydermoperiostosis. Both are distinct clinical entities. In the hereditary or familial form, the clubbing develops during childhood in the absence of any associated disorder and it persists throughout the life of the individual. Family studies have suggested an autosomal dominant pattern of inheritance.2 Clubbing associated with hypertrophic osteoarthropathy, is also referred to as pachydermoperiostitis or Touraine-Solente-Gole syndrome. This condition is characterized by clubbing, periostitis, and skin changes.

In our patient it was initially thought that this could be congenital clubbing, which the patient may not have noticed earlier. However, he had undergone a thorough medical check-up at the time of recruitment into the army at the age of 18 and also subsequently, during periodic routine medical examination conducted by medical specialists. It is, therefore, extremely unlikely that such gross clubbing would have been missed. The patient has been under follow-up for the last two years, and there are no fresh complaints or clinical findings to point towards a cause for the clubbing.

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