LETTERS

Detection of Hepatitis C Virus by Third Generation Enzyme Immunoassay

Sir,

Successful molecular cloning of the genome of hepatitis C virus (HCV) has resulted in detailed analysis of the sequence and organization of the virus genome and expression of recombinant HCV antigens for use in diagnostic immunoassays.¹

Of the various immunoassays now available for detection of HCV, in the first generation immunoassays a portion of non-structural protein NS4 (termed C-100-3) was used as a target antigen to detect antibodies to HCV (anti-HCV). However the assay showed an undesirable level of nonspecificity² and failed to detect anti-HCV in a number of infectious blood donations.³ In second generation assays, along with C-100-3, core (C22) and NS3 (C33) proteins were used. This increased the specificity and sensitivity of the test and could detect seroconversion earlier.

The carrier rate of HCV in blood donors varies from as low as 0.5% and 6% worldwide. By using second generation enzyme immunoassay, an incidence varying between 0.5% to 2.5%³ has been reported from our country. At the Christian Medical College Hospital, Ludhiana, we tested 3900 healthy voluntary blood donors in the age group of 20-35 years for anti-HCV by second generation enzyme immunoassays (kits supplied by UBL, New York (Infar) and found that the frequency of HCV positivity was only 0.2% (8/3900). These donors tested negative for HIV, HBsAg and anti-HBc IgM.

In the third generation HCV enzyme immunoassays, wells are coated with synthetic peptides from core, NS3, NS4 and NS5 regions. This makes the test more specific since NS4 protein is considered to be an excellent marker of chronic infections. Since February 1995, we have been testing the blood donors for HCV by third generation kits (UBL, New York). Of the 322 healthy voluntary blood donors tested in age the group of 20-35 years, 4% (13/322) were positive. These donors were negative for HIV, HBsAg and anti-HBc IgM and had normal serum transaminases.

Positivity for anti-HCV by third generation tests was thus much higher as compared to that by second generation assays. Though these findings need to be confirmed by recombinant immunoblot assays (RIBA4), they indicate that screening of donors by second generation kits may underestimate HCV frequency. No data on HCV prevalence by third generation ELISA are available in our country and this probably is the first report.

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References


Complications after appendicectomy are rare; further it is extremely rare to have them many years later. We report here a patient who presented with cecocutaneous fistula 40 years after appendicectomy.

A 65-year-old man presented with complaint of fecal discharge through an abdominal scar for 4 years. He had undergone an elective appendicectomy 40 years ago; no histopathological result was however available. There was no history of fever, cough, expectoration or altered bowel habits. He had been receiving oral antidiabetic drugs regularly for more than 10 years. On examination, he was obese and had a right lower paramedian scar with three sinuses discharging fecal and purulent matter; surrounding skin was normal. Per rectal examination was normal.

Urine analysis, hemogram and biochemical studies were within normal limits except for an elevated blood glucose level (200 mg/dL). Sinogram through one of the sinuses showed normal omentum and part of ascending colon. Barium enema and colonoscopy did not reveal any abnormality.

At surgery, which was done after controlling diabetes, there was a fistulous communication between the parietal wall and the base of the omentum with necrotic tissue in the subcutaneous plane. Appendix was absent and the ileocolic junction was normal; no other abnormality was seen in the abdomen. A limited resection of the ileocolic junction and ascending colon was done; continuity was restored with ileo-ascending colon anastomosis. The previous scar was excised and necrotic tissue debrided. Histology of the specimen showed chronic inflammation at the fistulous site; rest of the bowel was normal. There was no evidence of tuberculosis, other
granulomatous disease or amebic infection. The patient is well seven years later.

Cecocutaneous fistula can occur after removal of a severely inflamed appendix. Spontaneous fistula has been observed with underlying diseases like tuberculosis, Crohn's disease and amebiasis. Rarely a malignant lesion breaks down causing cecocutaneous fistula. There is only one report in the literature of a cecocutaneous fistula 44 years after emergency appendectomy.1

The fistula formation in our patient is attributed to appendectomy since there was no underlying pathology and the fistulous opening was located at the base of the cecum where the appendix is normally attached. Another possibility is a solitary ulcer of the cecum which perforated and formed an abscess and worked its way through the scar.

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Reference

Rare Ryle's Tube Knot

Sir,

A 65-year-old man presented with dysphagia of 15 days' duration. Investigation revealed the presence of exophytic growth at the junction of the middle and lower thirds of the esophagus. Histological examination of the biopsy specimen suggested epidermoid carcinoma. The patient received 8 cycles of chemotherapy in the form of methotrexate 50 mg intravenously and 5-FU every week. He had relief in dysphagia, but did not follow up. He returned after two years with grade 3 dysphagia.

Dilatation was done using Savary-Gillard dilators of up to 12.8 mm. Then with the help of a guidewire, a 16F Ryle's tube was placed and its position confirmed on fluoroscopy.

The patient received tube feeding for 4 days without any complaint. Theraeafter, regurgitation reappeared. We suspected Ryle's tube blockage and a change of tube was advised. But during removal of the tube, some resistance was felt. With some manipulation, the tube was removed with slight nostril bleeding. To our surprise, a complete knot was seen at the distal end of the tube; this knot was the cause of blockage.

On detailed enquiry, no definitive cause of Ryle's tube knot could be found. We are not aware of any previous report of complete knot of Ryle's tube.

SUDHIR LOKWANI
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RAJEN TANKSHALI
DEVENDRA PATEL

NEWS AND NOTICES

1st World Conference on the Prevention and Treatment of Caustic Esophageal Burns in Children will be held in İzmir, Turkey, on April 3-5, 1996. For details contact: Prof Okuy MURAF
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"Digestive Disease Week" will be held October 31-November 6, 1995 in Cuttack/Bhubaneswar (Orissa).

The 36th Annual Conference of Indian Society of Gastroenterology in association with Indian Association of Study of the Liver and Society of Gastrointestinal Endoscopy of India will be held on November 2-5, 1995 in Cuttack. A Preconference Hepatitis Symposium will be held on October 31, 1995 in Bhubaneswar and an International Peptic Ulcer Symposium will be held in Bhubaneswar on November 1, 1995. For details, contact:

Dr Shivaram Prasad Singh
"Chouhan Bhawan" Katnagoda Sahi
Cuttack 753 001 Orissa (India)
Phone: (0671) 35417/614141, Fax: (91-0671) 614501.

ICMR-NIC Centre has been identified as the agency to disseminate information from MEDLINE and three databases on AIDS to the medical community in the country. To access the MEDLINE databases at NIC, New Delhi, an institution is required to dial up to the nearest NICNET access point using a telephone line or modem. ICMR-NIC Centre (on its own cost of travel) may also be invited to present the services available during all conferences/seminars. ICMR-NIC Centre would bear the cost of travel. For clarification and invitation contact:

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