

SEVERE JAUNDICE AS PRESENTING SYMPTOM OF GENERALIZED PERITONITIS FOLLOWING CESAREAN SECTION

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Summary: Jaundice complicating severe bacterial infection has already been described; much less common is its occurrence as the presenting symptom of severe sepsis.

A case is presented describing a patient who developed rapid increasing jaundice on the 4th day after an elective cesarean section, accompanied by deterioration in her general status. Various diagnostic means (abdominal CT, ultrasound investigation and hepatosplenic scanning) were performed in order to confirm or rule out the possibility of intraabdominal sepsis and the only finding on physical examination, being the absence of peristaltics. In spite of negative results of all the image processing techniques the patient underwent an explorative laparotomy on the 6th day, which revealed a generalized purulent peritonitis.

It should be emphasized that: 1) Severe jaundice maybe the presenting symptom of sepsis. 2) False negative results of several modern image processing procedures may mislead the diagnostic approach and the subsequent therapeutic methods.

INTRODUCTION

Jaundice, complicating severe bacterial infection in newborns, is a well-known phenomenon; its occurrence in adults is less common.

In a thorough screening of the English literature we could not find reports describing severe jaundice as the presenting symptom of sepsis or generalized peritonitis following a cesarean section. Elay *et al.* (1) report a single case of tubo-ovarian abscess associated with sepsis and jaundice. Miller *et al.* (2) describe a series of 30 patients who developed jaundice during the course of severe bacterial infection originating from various sites. In one case jaundice was associated with septic abortion and in another four cases with pelvic infection.

Mortality rate was 43.3% (13 p. out of 30), while the survivors had a complete recovery. We present hereby a patient who developed severe jaundice on the 4th post-operative day, after a re-

peated elective cesarean section, as a consequence of diffused peritonitis originating in a surgical scar abscess formation.

CASE REPORT

A 33-year-old female (gravida 3, para 2) was admitted at the 40th week of pregnancy, for an elective cesarean section. She underwent two previous cesarean sections 8 years and 3 years ago, the latter ending in the neonate's death after 3 days, due to Respiratory Distress Syndrome. On admission, physical examination was normal, except for varicose veins in both legs. On the same day a low-segment cesarean section was performed, under an epidural anaesthesia with Marcain 0.5% + Adrenalin, without any technical difficulties. A healthy female newborn, weighing 3000 g, Apgar 9/10, was delivered.

The post-operative period was uneventful and the patient, treated routinely with Metronidazol 1.5 g/day, presented no fever or any other complications. The surgical scar, having been examined daily, appeared to be normal. On the 4th post-operative day the patient complained of abdominal pain and started vomiting. Fever was still undetected, tachycardia (140 b/min) and tachypnea (44 b/min) were present and for the first time jaundice was observed. On examination, the abdomen was distended, presenting

tenderness in the left flank, without guarding or rebound. Liver and spleen were not enlarged. No peristalsis was present. Flair abdominal X-ray findings corresponded to paralytic ileus. Chest X-ray was normal. Current laboratory studies showed hemoglobin 11.9 g/dl (unchanged, compared to previous values, W.B.C. 14,800, total serum bilirubin level 11.6 g/dl, of which 9.6 g/dl direct. PTT 46", serum urea level 16 mg/dl.

A rapid deterioration in the patient's respiratory and hemodynamic condition at this stage necessitated her transfer to the General Intensive Care Unit. During the 5th post-operative day, serum bilirubin level increased rapidly, reaching 24.7 g/dl in the morning of the 6th day. All hepatic enzymes remained within normal limits. L.D.H. was slightly elevated. Abdominal radioactive scanning were performed, all of which revealed no intra-abdominal findings, except for a very mild hepato-spleno megalay. Leucocytes count on the 6th post-operative day was 27,000, containing 50% band forms. The patient's temperature, nevertheless remained normal. It should be emphasized, at this point, that repeated abdominal and vaginal examinations failed indicate that peritonitis was taking place.

In spite of the abdominal "innocence", an explorative laparotomy was performed on the 6th post-operative day. On peritoneal opening, a large amount - over 2 litres - of purulent exudate was found, spread all over the peritoneal cavity, including both subphrenic areas. The origin of the pus collection was found in an extraperitoneal surgical scar abscess formation that perforated the peritoneum and drained into its cavity. All intra-abdominal organs were examined and found normal. Bacteriological studies of the intra-abdominal exudate grew *E. Coli*, *Enterobacter* and *Staphylococcus coagulase* positive. No growth was detected in pre- and post-operative blood cultures.

Following surgery and drainage, a rapid recovery took place, the patient having been treated with broad-spectrum antibiotics. Laboratory tests findings returned to normal values impressively fast.

DISCUSSION

As stated by Vermillon *et al.* (3), jaundice associated with sepsis is frequently misinterpreted as a sign of a primary hepatic or biliary tract disease. Zimmer-

man *et al.* (4) suggest that the pathogenesis of jaundice associated with sepsis is due to structural or functional changes, caused by endotoxines, that are a complex lipopolysaccharide of the outer membrane of the bacterial cell wall. This jaundice is usually of a cholestatic type, with most of the serum bilirubin being that liver enzymes are usually of normal direct-reacting. It should be pointed-out or slightly elevated values.

In our case, the diagnosis was particularly difficult due to the absence of fever; the only objective clue was lack of peristalsis and a peristant paralytic ileus. Only the exclusion of a primary hepatic disease, based on liver enzymes studies, led us to the decision to perform an explorative laparotomy.

The presentation of this case illustration of three diagnostic obstacles:

1. Severe jaundice can be the presenting symptom of a grave underlying septic condition.
2. An abdominal catastrophe can take place without typical signs in a young, previously healthy woman.
3. Cross-matching of modern image processing abdominal studying techniques, such as CT-Scan and Ultrasound, may give false-negative results, failing to reveal gross intra-abdominal events.

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