BILE PERITONITIS IN INFANCY

BY

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So far as I have been able to ascertain this is the first case of bile peritonitis in infancy occurring without trauma to be reported in this country. Caulfield (1936) published two similar cases in America, and stated that severe trauma had caused rupture to the gall-bladder or common duct in all the reported cases he could find.

Case Report

The patient, a baby girl aged 1 year and 10 months, was admitted to the children's department of the Royal Victoria Infirmary on Nov. 28, 1946. The child had been well until 36 hours before admission. She woke her parents up in the early morning of the 27th, was restless but did not cry. She had complete loss of appetite, and vomited once towards evening. Her bowels moved four times during the day, but the motions were apparently normal in colour. On the day of admission she again vomited, but slept fitfully and did not appear to be in much pain.

On admission at 7.30 p.m. she was collapsed, her extremities were cold and cyanotic, her respiration was rapid, but her chest showed no abnormal physical signs. The abdomen was slightly distended, with some generalized tenderness. The child's condition was so poor that it was decided to give an intravenous transfusion of plasma and to re-examine her when some improvement had occurred. Consequently 200 ml. of plasma was given in about two hours, by which time her condition was much improved. A further examination showed a somewhat distended abdomen, with generalized tenderness, especially in the upper abdomen. There were diminished resonance in the flanks and tenderness per rectum. The temperature was 103° F. (39.4° C.), pulse 150, and respirations 50. The white cell count was 31,500 per c.mm. A diagnosis of peritonitis, probably associated with appendicitis, was made.

The abdomen was opened through a right paramedian para-umbilical incision. A large quantity of bile-stained fluid escaped from the peritoneal cavity; this was not measured, but it was estimated to be about 400-500 ml. The incision was enlarged upwards, and a rapid inspection of the gall-bladder and common duct did not reveal any gross abnormality. There was some retroperitoneal oedema, and flecks of lymph were present in the region of the duodenum. As the child's condition was not very satisfactory simple drainage in the region of the common duct was performed. Culture of the bile proved sterile. The origin of the bile being uncertain it was decided to aspirate the stomach post-operatively, giving 100 ml. of saline every three hours intravenously. This treatment was continued until Nov. 30. Bile was still draining from the wound. The drainage-tube was removed on the seventh post-operative day, and by Dec. 10 the wound was almost healed and the bile drainage had cleared up.

The patient was discharged from hospital on Dec. 11, but was readmitted on Jan. 2, 1947, complaining of abdominal pain and vomiting; this, however, settled down very quickly. A cholecystogram revealed a gall-bladder which seemed to function normally. The child was discharged again, apparently well, on Jan. 8.

Discussion

Bile peritonitis following trauma to the liver is relatively common. I saw two cases due to bomb-splinter wounds while serving with a field surgical unit. Both these cases recovered. I have also seen bile peritonitis associated with crush injury and laceration of the liver; this patient survived the onset of bile peritonitis but subsequently died of uraemia.

Most surgeons have seen a case of bile peritonitis in adults without apparent cause. One case reported to me

by Mr. T. A. Hindmarsh (personal communication) had two such attacks, separated by an interval of seven years' normal health. It is certainly not the fatal condition it is sometimes said to be, unless it is associated with gall-bladder disease.

It is thought that in the above case there must have been a small cyst or aberrant duct which had ruptured; the abnormality must have been a minor one, as recovery was rapid and apparently complete. As an alternative cause, in view of the retroperitoneal oedema, I considered the possibility of a duodenal saccule which had ruptured, but the subsequent behaviour of the case ruled this out of court. Remarkable features are the leucocytosis and the pyrexia, suggesting an inflammatory cause; as already stated, however, the bile was sterile.

Caulfield's cases were somewhat similar to the above case: both his cases occurred in male infants under six months old, but the onset was more gradual, the babies had no abnormal temperature, and they were jaundiced. It is interesting to notice that in the surviving case simple drainage in the region of the common duct, such as I performed, was sufficient apparently to cure the condition. Caulfield came to the same conclusion—that there must have been some minor abnormality of the ducts. In his other case no operation was performed, and it was found post mortem that there was a congenital stricture of the common duct.

Summary

A case of bile peritonitis in early childhood is described. It is claimed to be the first reported case in this country. Simple drainage in the region of the common duct effected an apparent cure.

The possible aetiology of the case is discussed.

Comparison is made with Caulfield's cases.

I would like to thank Prof. J. C. Spence for permission to publish this case, and Miss M. Swinburne and other members of the Children's Department for their co-operation in the pre- and post-operative treatment.

REFERENCE

Caulfield, E. (1936). *Amer. J. Dis. Child.*, **52**, 1348.

THE BERGER-KHAN TEST FOR SYPHILIS

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Whilst using the dye isamine blue as an indicator in serological tests for syphilis Berger (1943) found that certain other dyes when mixed with a suitable alcoholic heart extract caused, in syphilitic sera, not only the formation of coloured precipitates but an increase in the sensitivity of the reaction. This sensitivity was directly proportional to the amount of dye present in the antigen. Janus green and Victoria blue were the dyes of choice, as they appeared to be the best sensitizers and in their presence heavy flocculation rapidly occurred. The precipitate was intensely coloured and took up all the dye from the solution, leaving a water-clear supernatant fluid. Sera containing amounts of syphilis antibody too small to react with a given antigen without dye showed marked flocculation in the presence of Victoria blue or Janus green. Berger pictured the sensitizing action of the dye as an antibody-like effect which had been deprived of its specificity and which was