increased in certain types of women, such as those without children and those with a family history of the disease, none of the differences is great enough for it to be of practical use. However, recent work has shown that many women with early breast cancer excrete abnormal amounts of steroids in their urine, and a trial is in progress to investigate whether this abnormality precedes the onset of the disease. It has also been reported that buccal smears from many patients with breast cancer show certain sexchromatin anomalies in the epithelium which are not present in normal women or patients with other malignant tumours. If either or both of these findings could be used to formulate a high-risk group then we might see mammography and clinical examination being used with advantage to detect the early disease. Under such circumstances we might at least look forward to an overall improvement in the results of treatment.

Closed Abdominal Trauma

Attention was drawn recently to the rise in the frequency of stab wounds of the abdomen. Injuries due to blunt abdominal trauma are also becoming increasingly common, mainly as a result of the rising numbers of road traffic accidents.

Closed injuries of the abdomen present a challenging problem in management, as prompt diagnosis and treatment are essential if lives are to be saved. Not only is the patient usually severely shocked, with damage to more than one intra-abdominal viscus, but frequently there are also associated injuries elsewhere. R. D. Williams and A. A. Yurko recently reviewed 278 consecutive patients admitted to the Ohio State University Hospital in Columbus as a result of blunt abdominal trauma. Almost two-thirds of the injuries were due to road accidents. By far the commonest organs injured were the kidney and the spleen, followed in order by the liver, the pancreas, the bladder, and the intestines. More than one intra-abdominal organ had been injured in 84 patients, and in addition one-third had injuries to the chest, one-third injuries to the head, and one-quarter damage to the arms or legs. These more obvious injuries often distract attention away from the abdomen and cause delay in treatment and an increase in mortality, either because of the delay or because of the severity of the injuries themselves. Indeed, H. Ellis, P. W. W. Griffiths, and A. Macintyre found that of the nine deaths which occurred in 30 patients with traumatic haemoperitoneum from ruptures of the spleen or liver or both, eight had severe associated head injuries, and the ninth had multiple injuries elsewhere.

The diagnosis that an intra-abdominal viscus has been torn is largely a clinical one, and the laboratory can provide only slight help to the surgeon. Williams and Yurko found that x-ray examination of the abdomen was of relatively little value, and in only 11% of their cases were the films helpful. An x-ray film of the chest is useful, however, in excluding an associated injury to the lungs or the diaphragm. Elevation of the white cell count may reflect the degree of general trauma but has no specific diagnostic value. W. V. Nick, R. W. Zollinger, and R. D. Williams stress the value of estimation of the serum amylase in the diagnosis of injuries of the pancreas, though the level is not always raised in such cases. The presence of haematuria is valuable evidence of injury to the genito-urinary tract, and the urine must be tested in every case of abdominal trauma, no matter how trivial. When there is doubt whether an intra-abdominal organ has been damaged needle paracentesis may be useful. Williams and Yurko found that this technique gave the right answer in 90% of cases, but they stress that failure to aspirate blood does not exclude the existence of injury.

A further complication is the possibility of delayed rupture of viscera which may occur after blunt injury; this applies particularly to the spleen, as was first stressed by Sir Archibald McIndoe, J. S. Sizer, E. R. Wayne, and P. L. Frederick have reviewed 312 examples of delayed splenic rupture. Half of these occurred between the second and seventh days after the injury, 25% after the first week, and 10% of the cases were delayed for more than one month. Apparently what happens is that a subcapsular splenic haematoma ruptures, and this is often precipitated by coughing or sneezing. The mortality in such cases is in the region of 10% and correct diagnosis was made in only 20%. Delayed rupture of the damaged liver and bowel may also occur.

Patients with closed and isolated injuries to the kidneys can usually be managed conservatively, though occasionally bleeding will continue, when urgent exploration and probably nephrectomy will be required. If there is any suspicion of damage to the other viscera laparotomy is imperative. In such cases a midline incision is best as it allows rapid entry, easy extension in an upward or downward direction, and the ready exposure of all the intra-abdominal organs. Ease of exposure is specially important, since it is always possible that more than one viscus will be found to be damaged—particularly when the injuries result from a road accident.

Liver Necrosis from Paracetamol

Most people regard paracetamol as a useful if somewhat expensive alternative to aspirin, especially when the latter causes gastro-intestinal symptoms. It is a relatively mild analgesic and in therapeutic doses appears to be free from side-effects. No evidence of nephrotoxicity was found when paracetamol was administered to healthy volunteers, but the fact that it is a breakdown product of phenacetin should serve as a warning that prolonged administration might lead to renal damage. Idiosyncrasy to the drug probably explains rare cases of thrombocytopenic purpura and agranulocytosis, and the occasional patient who is sensitive to aspirin may also be unable to tolerate paracetamol.

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