the valve was therefore explored. At operation it was found that the explanation of the x-ray appearance was that the "false aneurysm" part of the catheter was made of clear, non-radio-opaque plastic tubing with direct continuity between the valve and the radio-opaque catheter which started 3 mm from the metal valve (fig 1, inset B). Exploration of the abdomen showed that the peritoneal catheter was blocked with omentum and that portion was replaced. There was free flow of CSF from the end of the peritoneal catheter when it was returned to the abdomen. The patient has remained well postoperatively, more than two years later.

Since this episode, other patients with Cordis integral valve systems have had their shunt systems x-rayed showing a similar "disconnection". Systems from different batches of manufacture, and both medium and low pressure systems were involved.

It is therefore important that, when such integral systems are inserted, the continuity of the radio-opaque tubing is noted and documented to avoid a subsequent unnecessary exploration. The manufacturers inform us that the permissible gap is less than 3~8 mm, usually between 1~2 mm, so that a small gap is expected and normal. These figures hold for standard (that is, non-paediatric size) valves as well.

Radiologists and clinicians need to be aware of this when studying radiographs so that there is no misdiagnosis of disconnection and an unnecessary exploration is avoided.

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