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Twenty-three children aged between 49 and 121 months (average 68.52 months) bearing ventriculoperitoneal shunts were submitted to evaluation of cerebrospinal fluid flow with radionuclide (Technetium 99m).

The shunts had been implanted 49 to 79 months (average 61.61 months) before the above evaluation. During this period no clinical signs of malfunction or obstruction of the shunts appeared in any of the patients.

The examinations showed that the shunts were functioning. Twenty-two of them (95.83%) showed an absolutely normal flow, and one of them (4.15%) showed a slower flow.

None of the patients presented evidence of infection following the examination, which also confirms the method's safety.

In this study the following points are discussed:
- the history and the clinical and surgical treatments of hydrocephalus;
- the complications in ventriculoperitoneal shunts;
- the methods for evaluation of shunts patency, and the indications for the study of cerebrospinal fluid flow with radionuclides.

KEY WORDS: hydrocephalus, children, ventriculoperitoneal shunt, cerebrospinal fluid flow, radionuclides, technetium 99m.


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