

Title	Protocols for Stillbirth Investigation
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Aim

To identify the most appropriate investigative protocol, or protocol component, for determining the cause(s) of stillbirth, and to collate and compare protocols recommended by health authorities and obstetric and gynecological associations in Canada and worldwide.

Conclusions and results

There is no generally accepted gold standard protocol for stillbirth investigation, and it is yet to be determined which components are essential to an efficient and comprehensive investigation.

Five protocols from Canada, the USA, and Australia/New Zealand were found. They outline similar steps in stillbirth investigation: maternal and family history; maternal investigation; and stillborn infant, cord, and placental examination. All recommend a complete perinatal autopsy and cord and placenta examinations. If consent for a full autopsy cannot be obtained, a limited autopsy is recommended. The protocols differed in their recommendations on which tests to include and what components should be core or additional investigations. The Alberta protocol compared well with the other publicly available protocols.

Seven cross-sectional analytic studies assessing the value of components of stillbirth investigations met the inclusion criteria. In 5 retrospective studies, autopsy findings confirmed clinical findings in 29% to 90% of cases, and revealed a change in diagnosis in 20% to 40% of cases. Two prospective studies reported that placental examination findings were diagnostic in 23% to 47% of cases. No studies were found that compared specific protocols.

Poor evidence quality and limited data reporting permit only general conclusions. The evidence highlighted the important diagnostic contribution of fetal autopsy and placental examination in stillbirth investigations, but it is unclear which of the other components are essential. The probability of perinatal autopsy and placental examinations providing clinically significant information is directly related to the quality of the postmortem.

Recommendations

- Physicians should use the Stillborn Investigative Protocol recommended by the Alberta Medical Association in all stillbirth investigations.
- Finding ways to improve the rates of fetal autopsy and placental examination would assist the process of stillbirth

investigation. It is important to encourage greater participation of clinical staff and educate parents about the value of these procedures.

- Parents considering postmortem ultrasound and magnetic resonance imaging should be counseled on the limitations of these techniques as substitutes for fetal autopsy and placental examination.

Methods

All original, published studies on using a specific protocol, test or examination to determine the cause of stillbirth were identified by searching The Cochrane Library, PubMed, EMBASE, CINAHL, HealthSTAR, Science Citation Index, BIOSIS, and websites of health technology assessment agencies, research registers, evidence-based medicine resources, and practice guidelines from January 1985 to June 2005. The medical literature was searched to identify publicly available protocols.

Further research/reviews required

Further analysis is needed to establish the critical components of an efficient and effective protocol for stillbirth investigation. This will help ensure that the timing and sequence of tests is synchronized to achieve the best use of pathology specimens within the constraints of time, resources, and access to pathology samples.

Written by

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