

Screening for Women with Chorioamnionitis: An Integrative Literature Review

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Abstract : Introduction: Women die in pregnancy and childbirth for five main reasons—severe bleeding, infections, unsafe abortions, hypertensive disorders (pre-eclampsia and eclampsia), and medical complications including cardiac disease, diabetes, or HIV/AIDS complicated by pregnancy. In 2015, WHO classified sepsis as the third highest cause for maternal mortalities in the world. Chorioamnionitis is a clinical syndrome of intrauterine infection during any stage of the pregnancy and it refers to ascending bacteria from the vaginal canal up into the uterus, causing infection. While the incidence rates for chorioamnionitis are not well documented, complications related to chorioamnionitis are well documented and midwives still struggle to identify this condition in time due to its complex nature. Few diagnostic methods are available in public health services, due to escalated laboratory costs. Often the affordable biomarkers, such as C-reactive protein CRP, full blood count (FBC) and WBC, have low significance in diagnosing chorioamnionitis. A lack of screening impacts on effective and timeous management of chorioamnionitis, and early identification and management of risks could help to prevent neonatal complications and reduce the subsequent series of morbidities and healthcare costs of infants who are health foci of perinatal infections. Objective: This integrative literature review provides an overview of current best research evidence on the screening of women at risk for chorioamnionitis. Design: An integrative literature review was conducted using a systematic electronic literature search through EBSCOhost, Cochrane Online, Wiley Online, PubMed, Scopus and Google. Guidelines, research studies, and reports in English related to chorioamnionitis from 2008 up until 2020 were included in the study. Findings: After critical appraisal, 31 articles were included. More than one third (67%) of the literature included ranked on the three highest levels of evidence (Level I, II and III). Data extracted regarding screening for chorioamnionitis was synthesized into four themes, namely: screening by clinical signs and symptoms, screening by causative factors of chorioamnionitis, screening of obstetric history, and essential biomarkers to diagnose chorioamnionitis. Key conclusions: There are factors that can be used by midwives to identify women at risk for chorioamnionitis. However, there are a paucity of established sociological, epidemiological and behavioral factors to screen this population. Several biomarkers are available to diagnose chorioamnionitis. Increased Interleukin-6 in amniotic fluid is the better indicator and strongest predictor of histological chorioamnionitis, whereas the available rapid matrix-metalloproteinase-8 test requires further testing. Maternal white blood cells count (WBC) has shown poor selectivity and sensitivity, and C-reactive protein (CRP) thresholds varied among studies and are not ideal for conclusive diagnosis of subclinical chorioamnionitis. Implications for practice: Screening of women at risk for chorioamnionitis by health care providers providing care for pregnant women, including midwives, is important for diagnosis and management before complications arise, particularly in resource-constraint settings.

Keywords : chorioamnionitis, guidelines, best evidence, screening, diagnosis, pregnant women

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