 Clinical Librarian Search Summary

**Date Received: 18/3/20**

**Date Due: 15/4/20**

**Total time taken: 8 Hours
Number of full-text documents sent: 9**

|  |  |
| --- | --- |
| Question | Mast cell activation syndrome and impact during pregnancy and birth. |

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| **Type of Evidence**  |  |  |  |  |  |  |  |  | **Databases** |  |
| National/International Guideline | x |  |  |  |  |  |  | BMJ | x |
| Government/ Professional Body Reports | x |  |  |  |  |  |  | CINAHL | x |
| Point of Care Resources | x |  |  |  |  |  |  | EMBASE | x |
| Cochrane/Systematic Reviews |  |  |  |  |  |  |  | Medline | x |
| Cross Sectional Studies/Controlled Trials | x |  |   |  |  |  |  | NICE |  |
| Case Studies  | x |  |  |  |  |  |  | Psychinfo |  |
| Conference Abstracts/Editorials/Letters |  |  |  |  |  |  |  | Pubmed | x |
| Other |  |  |  |  |  |  |  | Uptodate | x |

Our overall rating of this evidence is  please use your own expertise to evaluate these results.

 Evidence rating scale: **High Quality**; **Medium Quality**; **Lower Quality**

**National Reports/Guidelines**

1. AAAAI Mast Cell Disorders Committee work group report: mast cell activation syndrome (MCAS) diagnosis and management [PDF] 26 September 2019: American Academy of Allergy, Asthma and Immunology. J Allergy Clinical Immunology, October 2019

Our current recommendations for diagnosing and treating primary mast cell (MC) activation syndrome make use of the latest studies and consensus guidelines for clinically recognizing

2. Karin Hartmann, Luis Escribano, Clive Grattan et al. (2016) European Competence Network on Mastocytosis (ECNM); American Academy of Allergy, Asthma, and Immunology (AAAAI); and European Academy of Allergology and Clinical Immunology (EAACI): Cutaneous manifestations in patients with mastocytosis – Consensus report. Journal of Allergy and Clinical Immunology Volume 137, Issue 1, January 2016, Pages 35-45

Cutaneous lesions in patients with mastocytosis are highly heterogeneous and encompass localized and disseminated forms. Although a classification and criteria for cutaneous mastocytosis (CM) have been proposed, there remains a need to better define sub forms of cutaneous manifestations in patients with mastocytosis. To address this unmet need, an international task […] met several times between 2010 and 2014 to discuss the classification and criteria for diagnosis of cutaneous manifestations in patients with mastocytosis. This article provides the major outcomes of these meetings and a proposal for a revised definition and criteria…

3. Ciach K, Niedoszytko M, Abacjew-Chmylko A, Pabin I, Adamski P, Leszczynska K, et al. (2016) Pregnancy and Delivery in Patients with Mastocytosis Treated at the Polish Center of the European Competence Network on Mastocytosis (ECNM). PLoS ONE 11(1): e0146924. doi:10.1371/journal. pone.0146924

Results

All 23 pregnancies resulted from natural conception. Obstetrical complications recorded in the first trimester included spontaneous miscarriage (5 pregnancies). Four patients delivered preterm, including one delivery due to preeclampsia at 26 weeks which resulted with neonate death due to extreme prematurity. Five women delivered via cesarean: four due to obstetrical indications and one due to mastocytosis, during which no anesthesia related complications were recorded. Of patients delivering vaginally, two received extradural anesthesia, three required oxytocin infusion due to uterine hypotonia. No labor complications were recorded. In one woman with pregnancy-induced hypertension, early puerperium was complicated by the presence of persistent arterial hypertension. One neonate was born with the signs of cutaneous mastocytosis. ….

4. R. J. Powell, S. C. Leech, S. Till, P. A. J. Huber, S. M. Nasser and A. T. Clark. BSACI guideline for the management of chronic urticaria and angioedemaClinical & Experimental Allergy, 2015(45) 547–565. [NICE Acredited]

Summary

This guidance for the management of patients with chronic urticaria and angioedema has been prepared by the Standards of Care Committee of the British Society for Allergy and Clinical Immunology (BSACI). The guideline is based on evidence as well as on expert opinion and is aimed at both adult physicians and paediatricians practising in allergy. The recommendations are evidence graded…

5. Valent P, Escribano L, Broesby-Olsen S. et al (2014) Proposed diagnostic algorithm for patients with suspected mastocytosis: a proposal of the European Competence Network on Mastocytosis. Allergy 2014; 69: 1267–1274.

Abstract

Mastocytosis is an emerging differential diagnosis in patients with more or less spe-ciﬁc mediator-related symptoms. In some of these patients, typical skin lesions arefound and the diagnosis of mastocytosis can be established.

6. Almudena Matito. The Mastocytosis Society. Mastocytosis and Pregnancy. <https://tmsforacure.org/mastocytosis-and-pregnancy/>

**Point of Care Resources**

7. Cem Akin(2020) Indolent and smoldering systemic mastocytosis: Management and prognosis. Uptodate <https://www.uptodate.com/contents/indolent-and-smoldering-systemic-mastocytosis-management-and-prognosis>

8. BMJ Best Practice. Assessment of urticarial: Differencials (Uncommon) Mastocytosis. <https://bestpractice.bmj.com/topics/en-gb/210/differentials>

**Published Research**

28 Saved HDAS Results

1. Significance of mast cells in spermatogenesis, implantation, pregnancy, and abortion: Cross talk and molecular mechanisms

2. Mast cell activation syndrome in pregnancy, delivery, postpartum and lactation: a narrative review.

3. Acute inflammation in the uterine isthmus coincides with postpartum acute myometritis in the uterine body involving refractory postpartum hemorrhage of unknown etiology after cesarean delivery.

4. Risk of comorbidities in patients diagnosed with chronic urticaria: A nationwide registry-study

5. Factors adversely influencing neurodevelopment.

6. Mast cell-induced immunopathology in recurrent pregnancy losses.

7. Mast cell involvement in human cervical ripening.

8. Successful mast-cell-targeted treatment of chronic dyspareunia, vaginitis, and dysfunctional uterine bleeding.

9. Sex in Respiratory and Skin Allergies

10. Management of urticaria: Update of Iranian society of dermatology clinical practice guideline

11. Management of a Parturient with Mast Cell Activation Syndrome: An Anesthesiologist's Experience.

12. Mimickers of Urticaria: Urticarial Vasculitis and Autoinflammatory Diseases.

13. Innate immune cells in the placental bed in healthy pregnancy and preeclampsia.

14. Mast cells: Novel role in the pathogenesis of recurrent pregnancy loss

15. Management of Mastocytosis in Pregnancy: A Review.

16. Management around invasive procedures in mastocytosis: An update

17. Pregnancy and Delivery in Patients with Mastocytosis Treated at the Polish Center of the European Competence Network on Mastocytosis (ECNM).

18. Advances in the understanding and clinical management of mastocytosis and clonal mast cell activation syndromes.

19. Maternal asthma and placental mast cell expression depending on asthma severity, fetal sex and presence of preeclampsia

20. H1-antihistamines for primary mast cell activation syndromes: a systematic review.

21. Mast cell-mediated and associated disorders in pregnancy: a risky game with an uncertain outcome?

22. Mastocytosis - A rare disease complicating pregnancy

23. Endocrine factors modulating immune responses in pregnancy

24. Immune cells in term and preterm labor.

25. Management of a parturient with mast cell activation syndrome.

26. Systemic mastocytosis complicating pregnancy.

27. Clinical impact of pregnancy in mastocytosis: a study of the Spanish Network on Mastocytosis (REMA) in 45 cases.

28. The role of mast cells and their mediators in reproduction, pregnancy and labour.

Full text documents or links to full text have been provided where available. If you would like copies of any of the HDAS articles listed above, please email library@boltonft.nhs.uk or use the [journal article request form](http://www.boltonft.nhs.uk/work-with-us/learn-with-us/library-services/request-a-journal-article-or-book/). See HDAS report for abstracts.

**Strategy 833728**

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| **#** | **Database** | **Search term** | **Results** |
| 1 | Medline | (Mast cell activation AND (pregnan\* OR birth OR gravid OR antepartum OR postpartum)).ti,ab | 50 |
| 2 | Medline | ("Mast cell activation").ti,ab | 2486 |
| 3 | Medline | "PREGNANCY COMPLICATIONS"/ OR "PERINATAL DEATH"/ | 90904 |
| 4 | Medline | (2 AND 3) | 1 |
| 5 | Medline | "IMMUNE COMPLEX DISEASES"/ OR MASTOCYTOSIS/ OR "MASTOCYTOSIS, SYSTEMIC"/ | 5285 |
| 6 | Medline | (3 AND 5) | 25 |
| 7 | CINAHL | "MAST CELLS"/ | 1486 |
| 8 | CINAHL | PREGNANCY/ OR CHILDBIRTH/ OR "MATERNAL-FETAL EXCHANGE"/ OR FERTILITY/ OR "FETAL DEVELOPMENT"/ | 216688 |
| 9 | CINAHL | (7 AND 8) | 21 |
| 10 | CINAHL | "PREGNANCY COMPLICATIONS"/ OR "FEMALE UROGENITAL DISEASES AND PREGNANCY COMPLICATIONS"/ | 18749 |
| 11 | CINAHL | (7 AND 10) | 3 |
| 12 | EMBASE | "MAST CELL"/ | 42010 |
| 13 | EMBASE | PREGNANCY/ | 583777 |
| 14 | EMBASE | (12 AND 13) | 289 |