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Enquiry Details

Syringomyelia, and in particular, risks or complications for if the patient is pregnant.
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Word documents
Select Edit from the menu, the Find and type in your term in the search box which is presented. The search function will locate the first use of the term in the document. By pressing ‘next’ you will jump to further references.
Management of Syringomyelia in Pregnancy-A Case Presentation
Hassaballa M.M., Vaughan H., Akhtar S., Tahir A.

Citation: International Journal of Gynecology and Obstetrics, October 2012, vol./is. 119/(S367), 0020-7292 (October 2012)

Objectives: To explore the management of Syringomyelia in pregnancy and to identify pitfalls in treating the disorder.

Materials: 28 years old A&E nurse who developed persistent headache and neck pain with signs and symptoms of limbs paraesthesia and weakness. An MRI confirmed the diagnosis of Syringomyelia in 2008 as cyst was found impinging on the CSF. She was managed conservatively. The patient declined surgical interventions in view of spontaneous resolution of the cyst with a subsequent improvement of all the ailments. She fell pregnant in 2011 and was managed jointly with no signs of the disease flaring up and went on to have a normal delivery, without any relevant complications.

Methods: The patient case notes and literature search were adopted to reveal that one third of patients with Syringomyelia the clinical course of the disease is static, however in the other two thirds a deterioration is likely to lead to neurological deficits.

Results: Syringomyelia is a rare neurological condition which is characterised by the formation of a cyst (syrinx) within the spinal cord. It occurs in 8.4 per 100,000 individuals and affects both men and women equally. The symptoms begin between ages 25-40 years. There is a strong association and probably a causal relationship between traumatic birth and communicating type of Syringomyelia. The aetiology and pathophysiology of the disease remain controversial. It is the expansion of the cyst into the spinal cord that leads to symptoms like headache, weakness and stiffness in the back, shoulders, arms and legs.

Conclusions: There is no significant effect of Syringomyelia on the progress of pregnancy, despite an anecdotal association with IUGR described in literature. The antenatal follow up must be in multidisciplinary manner involving Obstetrician but also neurosurgeons. It is vital to prevent any rise in CSF pressure in the intrapartum period. During epidural anaesthesia, although cerebrospinal pressure is maintained there is a risk of dural puncture and the potential onset of symptoms afterwards, thus spinal anaesthesia is best avoided. In patients with Syringomyelia requiring caesarean section for Obstetrics reason, Suxamethonium should be avoided if General anaesthesia is contemplated, as there is a risk of hyperkalaemia in patients with neurological disorders. The neonatal outcome is usually excellent.

Source: EMBASE

Cesarean Delivery in a Parturient with Syringomyelia and Worsening Neurological Symptoms.
Journal of Clinical Anesthesia, 12 2011, vol./is. 23/8(653-6), 0952-8180;1873-4529 (2011 Dec)
Nielsen JL, Bejjani GK, Vallejo MC

A parturient presented at 35 weeks' gestation with worsening neurological symptoms caused by syringomyelia. She underwent urgent cesarean delivery. The etiology and anesthetic considerations for an obstetrical patient with syringomyelia are discussed.
Publication type:Case Reports, Journal Article
Syringomyelia in Pregnancy- Is Caesarean Section The Best Option for Delivery? - A Case Report
Hakim Ba, Roszaman Ra, Nor Ziana AWa, Che Anuar CYb and Jefri Ac
Syringomyelia is a rare neurological disease, which is characterized by the formation of a cyst in the spinal cord. The aetiology of the disease still remains controversial. The damage to the spinal cord results in headache, weakness, stiffness and numbness on both lower and upper limbs. Only few a cases of syringomyelia in pregnancy have been reported thus far. As such, there is no standard management of intrapartum care.1 We present a case of symptomatic syringomyelia in pregnancy, its management and literature review. The mode of delivery with risks for vaginal route is discussed.
http://iiumedic.net/imjm/v1/download/Volume%2008%20No%201/IMJVol8No1pg39-40.pdf

Syringomyelia and Pregnancy-Case Report.
Daskalakis GJ, Katsetos CN, Papageorgiou IS, Antsaklis AJ, Vogas EK, Grivachevski VI, Michalas SK.
The course of a pregnancy in a woman with syringomyelia is presented. She was first admitted at 28 weeks' gestation suffering neurologic symptoms associated with a spinal cord injury, which had happened in the past. The disease was diagnosed with a magnetic resonance imaging (MRI). Delivery was accomplished by elective caesarean section under general anaesthesia at 37 weeks, in order to avoid straining during the second stage of an imminent labour.

Cesarean Section in a Patient with Syringomyelia.
PURPOSE: To describe the anesthetic management of Cesarean section in a patient with syringomyelia.
CLINICAL FEATURES: A 27-yr-old pregnant woman with syringomyelia was scheduled to undergo elective Cesarean section. At the age of 25 yr, she had begun to experience headaches, and at the age of 26 yr, a diagnosis of syringomyelia of the upper spinal cord was made on the basis of magnetic resonance imaging findings. No symptoms other than headache were noted preoperatively. General anesthesia was used for the Cesarean section. After the administration of 1 mg vecuronium as a priming dose, 5 mg vecuronium were injected.
At the onset of clinical muscle weakness, 225 mg thiamylal were promptly administered as the induction agent and the patient was intubated (timing principle with priming method) and pressure on the cricoid cartilage applied to prevent regurgitation of stomach contents. Anesthesia was maintained with oxygen, nitrous oxide and isoflurane at a low concentration. Mild hyperventilation was used throughout the procedure. Anesthesia and surgery proceeded without any problem, response to vecuronium was clinically normal and recovery was uneventful. Neurological status remained normal.
CONCLUSION: We report the safe use of general anesthesia for Cesarean section in a patient with syringomyelia. Precautions were taken to avoid increases in intracranial pressure and our patient experienced no untoward neurologic event.
Difficult Labour as a Cause of Communicating Syringomyelia.
Although some causes of communicating syringomyelia are known most cases of the disease can only be described as idiopathic. The results of a questionnaire suggest a high incidence of difficult labour in the mothers of syringomyelia patients. A high proportion of patients had forceps deliveries, and a high proportion were the first born in their families. Because the validity of taking a birth history at the age of presentation (mean age 40 y, S.D. 14 for this sample) might be questioned, patients admitted with other disorders (mean age 40 y, S.D. 16) were used as a control group. These patients matched the syringomyelia patients in social class and place of birth. It seems likely that birth trauma may be a cause of tonsillar descent through the foramen magnum (ectopia) and of arachnoiditis; both conditions are often present. Once the tonsils become engaged in the foramen magnum, difference between the cranial and spinal pressure may, over the course of several years, cause the tonsils to descend further, thus leading to communicating syringomyelia. Over half these patients have a history of difficult labour and it is possible that birth injury may be a factor even where birth is regarded as normal.

Syringomyelia and Chiari Malformation in Pregnancy

Chiari I Malformation With or Without Syringomyelia and Pregnancy: Case Studies And Review Of The Literature.
Women with Chiari I malformation with or without syringomyelia are of particular concern because of the potential risk of increased intracranial pressure during pregnancy and delivery. The following questions are most often asked in the clinical setting: Is it safe to have a planned pregnancy? Will the symptoms become worse or recur during pregnancy and will the baby be normal? Seven patients with Chiari I malformation, with and without syringomyelia, submitted checklists of self-reported symptoms experienced during pregnancy, labor, and postpartum. Seven patients with Chiari I malformation with and without syringomyelia were queried for symptoms during pregnancy, labor, and postpartum. None of the patients reported significant increase or recurrence of Chiari-related symptoms during delivery or postpartum. Four of the women had epidural anesthesia for delivery and reported no related symptoms. This series represents a small number of women with Chiari I malformation who had uncomplicated pregnancy, labor, and delivery.

Maternal Arnold-Chiari Type I Malformation and Syringomyelia: A Labor Management Dilemma.
Arnold-Chiari type I malformations consists of elongation of the cerebellar tonsils with their displacement below the foramen magnum. Syringomyelia is an associated cyst that accumulates cerebrospinal fluid in the cord that can impinge on local nerve fibers. Pregnant women with either of these disorders are of special concern due to the potential risk of brain stem herniation and or spinal column compression from physiological changes that occur during labor. We present two cases. The first case is a patient with syringomyelia who was admitted in labor with worsening peripheral neurological symptoms. Epidural anesthesia was placed and she underwent an uncomplicated cesarean delivery with resolution of her symptoms postpartum. The second case is a patient with an Arnold-Chiari type I
malformation and syringomyelia who presented in labor. The patient had an epidural placed and was allowed to progress to complete dilation and effacement at +2 station. She underwent a successful operative vaginal delivery without voluntary maternal expulsive efforts. Both patients had uncomplicated postpartum courses. Although these are rare disorders with significant potential morbidity, labor can be managed by either mode of delivery with careful patient selection. We caution that this review has insufficient numbers of patients to address the safety and efficacy of either delivery mode but rather focuses on alternatives for delivery. This report is the first to document a case of a patient with an Arnold-Chiari malformation and syringomyelia successfully managed in labor with a vaginal delivery.

Pregnancy and Chiari Malformation: Review of the Literature and Current Recommendations
Diane Mueller, accessed 08/01/2014
A frequent topic of concern for young women with Chiari I malformation (CMI) with or without syringomyelia (SM) is the safety of pregnancy and delivery. Though the medical literature is replete with information about Chiari and syringomyelia, a search of the English literature revealed very few articles regarding pregnancy among women diagnosed with CMI &/or SM. http://chiarimedicine.com/blog/2013/3/10/pregnancy-and-chiari-malformationsyringomyelia-review-of-the-literature-and-current-recommendations

Pregnancy and Chiari Malformation with or with out syringomyelia
by Diane Mueller, accessed 08/01/2014
The reason I became very interested in this due to the frequency of times I was having this discussion not only clinically but on the telephone or over the Internet: is it safe to plan a pregnancy when you have Chiari? Is it safe to have a vaginal birth? Should I have a c-section? I’ve even been contacted by many health care providers, asking if it safe for the patient to have a vaginal delivery. And what I found was there was very little literature to support either having a vaginal delivery or epidural. http://asap.org/index.php/disorders/pregnancy-and-chiari-malformation/

Syringomyelia Additional General information
Medscape
Syringomyelia
Hassan Ahmad Hassan Al-Shatoury
Background
Syringomyelia is the development of a fluid-filled cavity or syrinx within the spinal cord. Hydromyelia is a dilatation of the central canal by cerebrospinal fluid (CSF) and may be included within the definition of syringomyelia. The following are types of syringomyelia. http://emedicine.medscape.com/article/1151685-overview

Patient.co.uk
Syringomyelia and Syringobulbia
This PatientPlus article is written for healthcare professionals so the language may be more technical than the condition leaflets. You may find the abbreviations list helpful. http://www.patient.co.uk/doctor/Syringomyelia-and-Syringobulbia.htm
**Syringomyelia**

Mayo Clinic (accessed 6\(^{th}\) January 2014)

Syringomyelia (sih-ring-go-my-E-lee-uh) is the development of a fluid-filled cyst (syrinx) within your spinal cord. Over time, the cyst may enlarge, damaging your spinal cord and causing pain, weakness and stiffness, among other symptoms.

http://www.mayoclinic.org/diseases-conditions/syringomyelia/basics.definition/con-20034245

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**The Ann Conroy Trust British Syringomyelia and Chiari Society**

Information about Syringomyelia & Arnold Chiari Malformation (ACM) (accessed 6\(^{th}\) January 2014)

What is Syringomyelia?

Syringomyelia is a disorder affecting the nervous system where fluid-filled cavities develop inside the spinal cord. The spinal cord is normally a solid structure which passes down the back, inside the spinal canal. It connects the brain to the rest of the body, passing signals to and fro, enabling an individual to move his or her limbs at will, to feel objects and to control various bodily functions.

http://www.britishsyringomyelia-chiarisociety.org/info.htm

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**The Pathophysiology of Syringomyelia - Historical Overview and Current Concept.**


Various ideas and hypotheses have been brought forward to explain the development of syringomyelia in the past two centuries. None of them offers a sufficient basis to serve as a concept for the treatment of all affected patients. Apart from a discussion of the different hypotheses this paper proposes a new pathophysiological concept based on clinical, experimental and literature studies. Syringomyelia is understood as a state of chronic interstitial edema of the spinal cord due to accumulation of extracellular fluid (ECF). This accumulation is caused by a cascade of events starting with obstruction of cerebrospinal fluid (CSF) flow and/or spinal cord tethering which ultimately alter ECF flow and increase ECF volume. Treatment should be targeted against the pathological process which causes CSF flow obstruction and cord tethering to inhibit this pathophysiological process at a decisive point. Request from LKRS

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**Some Observations on the Pathogenesis of Syringomyelia.**

*Journal of Neurology, Neurosurgery & Psychiatry, 11 1981, vol./is. 44/11(964-9), 0022-3050;0022-3050 (1981 Nov)*

Newman PK, Terenty TR, Foster JB

The pathogenesis of most cases of syringomyelia remains obscure although a modification of the hydrodynamic theory of Gardner allows a logical surgical approach to treatment. Data are presented confirming a high incidence of traumatic birth in patients with syringomyelia who have a Chiari malformation or basal arachnoiditis, but demonstrating no increase in traumatic birth in patients with the Chiari malformation but no syringomyelia. A traumatic birth may be the factor responsible for creating the potential for syringomyelia in those individuals with the embryological defect of the Chiari anomaly.