

Case study

Case Report on Management of Meningitis with Hydrocephalus a Nurse prospective

Comment [t1]: Title should be write as follow:

Case Report on Management of Hydrocephalus as a Complication of Meningitis in Newborn: Nurse Prospective

Or

Case Report on Management of Meningitis associated with Hydrocephalus in Newborn: Nurse Prospective

Comment [t2]: of

Comment [t3]: Poor sentence. Revise this sentence and write it in correct manner.

Comment [t4]: What is the cause of brain damage? Mention it?

Comment [t5]: You should illustrate that hydrocephalus as a complication of meningitis

Comment [t6]: Organize your data and mention the age and gender of patient

Abstract

Introduction

Hydrocephalus is one of the commonest complications Of meningitis in children-with the disease. It is more severe in children than in adults. Fewer cases of meningitis are caused by chronic meningitis. Finding and treating the culprit organism is quite tough. In patients with chronic meningitis, complications such as hyponatremia, hydrocephalus, and neurological impairment should always be identified early and treated with a multidisciplinary team approach. We came across a case of severe brain damage that progressed to meningitis and hydrocephalus, which she was treated for numerous times before being returned home with some neurological disability.

Clinical findings:

High fever , refusal of feed, seizures like activity, bulging fontanel.
Diagnostic Evaluation : Hb: 10.7 , TLC : 21,500 . platelet: 5.1 eqL CBC , elevated WBC count of 23,511/ul KFT and LFT are normal , Brain MRI showed restricted diffusion, Lumbar Puncture was also performed same day E.coli gram negative bacteria are present in CSF collection

Therapeutic intervention :

Inj ceftriaxone 650 mg 6 hourly , Inj Pan 15 mg 24 hourly, Inj Emeset 2 ml 4 hourly IVF DNS with inj KCL 3.8 ml 8 hourly.

Outcome: After treatment the child-newborn showed improvement , deceased fever and seizures controlled.

Conclusion : A 1.5 month old female child-newborn was brought to A.V.B.R. Hospital Sawangi (meghe) wardha on date 18th November 2021 by her parents with complaint of fever, seizure, refuse to feed and bulging fontanel. After proper treatment her-newborn`s condition was improved.

Keywords: E.coli ,Meningitis, Hydrocephalus .

Comment [t7]: Organized your data And write the word without abbreviation

Injection and write the site of injection intramuscular or intravenous?

Mention the duration of treatment?

Mention the hospitalization period? (Length of hospital stay).

Comment [t8]: This data should be mentioned in the health history not in conclusion .

Rewrite the conclusion in a way that illustrate the result of the management.

Comment [t9]: Write words presented in the title

Introduction:

Meningitis is the inflammation of meninges; the covering membrane of the brain and spinal cord.¹Inflammation of meninges may occur ~~due to~~as a result of primary infection due to bacteria, fungus, viruses ~~etc.~~^{2, 3} Because of their immature immune systems, neonates and infants are more likely to develop acute bacterial meningitis. ⁴In My patient causative agent is E.coli bacteria

Comment [t10]: Data about your patient not mentioned in the introduction.

E. coli (Escherichia coli), is a type of bacteria that normally lives in ~~your~~intestines. It is gram negative bacillus. Early detection and treatment give a positive outcome .

E Coli is a gram negative bacteria. These bacteria are usually harmless, but some rare strains can cause serious illness. The vast majority of E. coli meningitis cases are caused by the disease-causing strain E. coli K1. The majority of E. coli meningitis cases occur in newborns or babies under the age of three months.⁵ Pediatrician must closely monitor these children's clinical progress and be aware of any potential complications. ~~meningitis~~Meningitis and hydrocephalus almost necessarily results in a neurosurgical interventions ⁶.Meningitis is a possible cause of hydrocephalus. It can also occur as a side effect of a shunt implanted to treat hydrocephalus. ~~When you have meningitis, the bacterial~~bacterial infection ~~of the meningitis~~ can cause swelling of the brain tissues. Swelling in the brain tissues can obstruct the flow of cerebrospinal fluid, ⁵ as well as the cause of hydrocephalus |The abnormal accumulation of cerebrospinal fluid (CSF) in the intracranial spaces is known as hydrocephalus. ⁶

Comment [t11]: ??????

Comment [t12]: You mentioned the word cerebrospinal fluid before not place the abbreviation here.

- When write the word for the first time, write it completely then write the abbreviation (), after that mention the word as abbreviation .

Hydrocephalus can be caused by congenital or acquired factors. Hydrocephalus is classified into two types: communicating hydrocephalus and non-communicating hydrocephalus. ^{7 8}

Case Presentation

Patient Identification :

The 1.5 month old female ~~child~~newborn admitted in A.V.B.R. Hospital Sawangi Meghe Wardha on 18th November 2021, further investigations she was diagnosed ~~as~~with aMeningitis associated with Hydrocephalus.

Present Medical History :

The 1.5 month old female ~~child~~newborn was brought to A.V.B.R. Hospital on 18th November 2021 by her parents with complaints of high fever, refusal of feed ,bulging of fontanelle and seizures, ~~further~~Further investigations she diagnosed as a Meningitis associated with Hydrocephalus.

Comment [t13]: What about current history of head trauma?

Past Medical History:

There is a ~~Low-low Birth-birth~~ baby and there is a history of 10 days NICU stay ~~After-after~~ birth.

Comment [t14]: Clarify your information

What about history of previous head trauma or birth head injury?

Family History :

There are 4 members in the family. ~~Child-newborn~~ belongs to a middle class family . The type of marriage of the parents of my patient is consanguineous. There is no other family history of convulsions , ~~Tuberculosis~~tuberculosis, etc. . ~~Other members of the family were not complaining about their health except my client.~~

Comment [t15]: Editing

No family history of meningitis or hydrocephalus
Paraphrasing words

Past intervention and outcomes :

~~My-the~~ patient was previously admitted to a private hospital in Buldhana. Patient condition ~~is~~ was being complicated and ~~Dr. Refer-refered~~ to A.V.B.R.Hospital Sawangi meghe wardha after investigations, ~~patient~~ Patient diagnosed ~~as-with a~~ Meningitis ~~associated~~ with Hydrocephalus and now patient condition is better.

Comment [t16]: ??? Describe

Comment [t17]: You talk about the past?

Clinical findings:

High fever, refusal to feed , bulging of fontanelle and seizures.

Etiology :

Inflammation of meninges may occur due to primary infection due to bacteria, fungus, viruses etc. Escherichia coli (E. coli) is a Gram-negative, facultative anaerobic, rod-shaped coliform bacteria of the genus Escherichia that is commonly found in the lower intestine of warm-blooded organisms. ⁷

Comment [t18]: What is the cause in your patient?

Physical examination:

Head to foot examination is done. Abnormalities occur in ~~Head-head~~ circumference: 52 cm. Increase the size of head , other measurements are normal such as ~~Chest-chest~~ circumference : 50 cm, ~~Mid-mid~~ arm circumference : 12 cm, ~~Height-height~~ : 84 cm , ~~Weight-weight~~ : 10 kg) .check vital signs (~~Temperature~~temperature:39.5°c , pulse: 130 beats/minute , ~~Respiration~~respiration: 32 breaths/ minute .

Diagnostic Evaluation:

CBC , elevated WBC count of 23,511/ul KFT and LFT are normal , Brain MRI showed restricted diffusion, Lumbar ~~Puncture-puncture~~ was also performed ~~the~~ same day (E.coli gram negative bacteria are present) in CSF collection.

Comment [t19]: Not write abbreviations

Therapeutic intervention:

Antibiotic, Anticonvulsive drugs and osmotic diuretic therapy are given to the patient . Administration of oxygen therapy , mechanical ventilation care should be given if a patient is needed.

Comment [t20]: Write the care given to your patient

Medical Management:

Inj ceftriaxone 650 mg 6 hourly
Inj pan 15 mg 24 hourly,
Inj emeset 2 ml 4 hourly
IVF DNS with inj KCL 3.8 ml 8 hourly.

Comment [t21]: Organized your data
And write the word without abbreviation

Injection and write the site of injection
intramuscular or intravenous?

Mention the duration of treatment?

Mention the hospitalization period?
(Length of hospital stay).

Nursing Diagnosis and Intervention :

*Altered cerebral tissue perfusion related to increased ICP.

Comment [t22]: Incomplete?

Intervention :

Comment [t23]: write the word without
abbreviation

- ~~I will assist~~ Assist the procedures to detect the exact pathology.
- ~~I will administer~~ Implement a treatment schedule as indicated, like providing medication with the right dose, route and frequency.
- ~~In case if the parents of patients seem to be anxious because of their child's condition then I will provide~~ Provide psychological support to the patient's family members.

Comment [t24]: ???

*Altered nutrition; less body requirement related to reduced oral intake.

Intervention:

- ~~I will administer~~ Administer intravenous drugs as per physicians order to maintain electrolyte balance.
- ~~I will provide~~ Explain to the newborn's mother about the importance of exclusive breastfeeding feeding to the Infant newborn.
- ~~If the patient's mother does not understand about breastfeeding then I will explain the procedure to the mother.~~

*Ineffective family coping related to the life threatening problem of infants newborn.

Intervention:

- ~~I will reduce~~ Reduce parental anxiety by explaining reassurance and encouraging ~~me~~ them to express feelings.
- ~~I will provide~~ Provide clear and adequate knowledge about ~~Treatment~~ treatment plan and disease ~~condition~~ progression

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Comment [t25]: Incomplete?

What about the follow up?

Discussion:

Neonatal meningitis is a potentially fatal medical condition that, if left untreated, can be fatal in infants. The inflammation of the meninges is known as meningitis, the central nervous system's protective membranes⁹. It occurs more frequently in the neonatal period (infants newborn less

Comment [t26]: Brief discussion, illustrate more, more previous studies were conducted before and you can benefit from it in your discussion

⁹ "Neonatal Meningitis."

than 44 days old) ~~than at any other time in life~~, and it is a major cause of morbidity and mortality worldwide.^{10, 11} Mortality in developing countries is roughly half that of developed countries, ranging from 8% to 12.5% ~~percent~~.^{12, 13} Bacteremia, or bacterial infection of the blood, is the most common cause of neonatal meningitis. The organisms responsible are diverse, with group B streptococci (*Streptococcus agalactiae*), *Escherichia coli*, and *Listeria monocytogenes* being the most common.¹⁴ Despite low mortality rates in developed countries, there is a 50% prevalence of neurodevelopmental disabilities after *E. coli* and *Streptococcus agalactiae* meningitis, and a 79% prevalence after Gram-negative rods other than *E. coli* meningitis.¹⁵ If neonatal meningitis is not treated promptly, it can result in cerebral palsy, blindness, deafness, seizure disorders, and learning disabilities.¹⁶

Conclusion:

The study focused on professional ~~Health health~~ care and ~~Nursing nursing Management management~~ and ~~trat~~ the ~~Meningitis meningitis associated~~ with ~~Hydrocephalus hydrocephalus~~ in patient 1.5 month old female ~~child newborn~~ admitted in A.v.B.R.Hospital sawangi Meghe Wardha with chief ~~Complaint complaint~~ of ~~Fever fever~~, seizure ~~like activity~~, refuse to feed and bulging fontanelle. The ~~hole~~ health care team work together and patient health is ~~Improve~~ improved.

References:

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3. Belizán, José M, Elizabeth M McClure, Shivaprasad S Goudar, Omrana Pasha, Fabian Esamai, Archana Patel, Elwyn Chomba, et al. "Neonatal Death in Low-Middle Income Countries: A Global Network Study." *American Journal of Perinatology* 29, no. 8 (September 2012): 649–56. <https://doi.org/10.1055/s-0032-1314885>.
4. Ku, Lawrence C., Kim A. Boggess, and Michael Cohen-Wolkowicz. "Bacterial Meningitis in the Infant." *Clinics in Perinatology* 42, no. 1 (March 2015): 29–45. <https://doi.org/10.1016/j.clp.2014.10.004>.
5. "Neonatal Meningitis." In *Wikipedia*, August 4, 2021. https://en.wikipedia.org/w/index.php?title=Neonatal_meningitis&oldid=1037106105.

Comment [t27]: In conclusion you should talk and focus on the result of the management (medical and nursing) provided to patients .

Also, describe the improvements???
What is the improvement?

Comment [t28]: ??

Comment [t29]: ????

Comment [t30]: Do not write et al name other authors

The manner you written the references very poor and most of the references written incompletely.

¹⁰ "Bacterial Meningitis in Newborns - Children's Health Issues."

¹¹ "About Bacterial Meningitis Infection | CDC."

¹² Belizán et al., "Neonatal Death in Low-Middle Income Countries."

¹³ Stuckler, "Population Causes and Consequences of Leading Chronic Diseases."

¹⁴ Simonsen et al., "Early-Onset Neonatal Sepsis."

¹⁵ Ku, Boggess, and Cohen-Wolkowicz, "Bacterial Meningitis in the Infant."

¹⁶ USA, "Signs and Symptoms of Cerebral Palsy | Cerebral Palsy Alliance Research Foundation - USA."

6. Simonsen, Kari A., Ann L. Anderson-Berry, Shirley F. Delair, and H. Dele Davies. "Early-Onset Neonatal Sepsis." *Clinical Microbiology Reviews* 27, no. 1 (January 2014): 21–47. <https://doi.org/10.1128/CMR.00031-13>.
7. Stuckler, David. "Population Causes and Consequences of Leading Chronic Diseases: A Comparative Analysis of Prevailing Explanations." *The Milbank Quarterly* 86, no. 2 (June 2008): 273–326. <https://doi.org/10.1111/j.1468-0009.2008.00522.x>.
8. USA, Cerebral Palsy Alliance Research Foundation-. "Signs and Symptoms of Cerebral Palsy | Cerebral Palsy Alliance Research Foundation - USA." Accessed November 24, 2021. <https://cparf.org/what-is-cerebral-palsy/signs-and-symptoms-of-cerebral-palsy/>.
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9. "Bacterial Meningitis in Newborns - Children's Health Issues."
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11. Belizán et al., "Neonatal Death in Low-Middle Income Countries."
12. Stuckler, "Population Causes and Consequences of Leading Chronic Diseases."
13. Simonsen et al., "Early-Onset Neonatal Sepsis."
14. Ku, Boggess, and Cohen-Wolkowicz, "Bacterial Meningitis in the Infant."
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Comment [t31]: Name other authors not write et al

Comment [t32]: Name other authors not write et al