

Case Report,

## A Descriptive Study on Complications of Ventriculoperitoneal Shunt Surgery in Nangarhar Regional Hospital

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### Abstract:

Ventriculoperitoneal shunt treats hydrocephalus by altering CSF flow within the brain. In most of the cases, shunts consist of three parts, which are serially connected to each other: the proximal catheter, one-way valve and distal catheter. Ventriculoperitoneal shunt is one of the most commonly performed neurosurgical procedure, both on the elective and emergency basis. Consequently, in this paper, the indications for shunt, the types used, cure, and complications of ventriculoperitoneal shunts were studied. During this "Quantitative", with amalgamating with case series study out of 109 VP-stunted patients, 38 were show up with complication. The shunt complication diagnosis is initially suspected according to the history and physical examination and high intracranial pressure. The purpose of this study is to determine VP-shunt complication, incidence of VP shunt complication in different age of childhood life and geographic findings of complication.

20 patients which is 52.6% of study is male patient, from 2 months to 2 years were 30 patients which (78.3%) of study, 26 complicated patients which is (68.4%) from Nangarhar province. During this study we found 8 patients (21.1%) with abdominal pseudo cyst, 3 patients (7.9%) with skin irritation, 2 patients with (5.3%) fever, 8 patients (21.1%) with shunt upper end and reserve infection, 6 patients (15.8%) with shunt lower end infection, 2 patients (5.3%) with disconnected shunt, 8 patients (21.1%) shunt tube lower end obstruction and 1 patient (2.6) with VP Shunt extrusion from month (real complication)..

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**Keywords:** Completion of hydrocephalus, surgical treatment of hydrocephalus, VP-Shunt interdiction and prevention of hydrocephalus patient

### Objectives:

This was a descriptive study done for patients who applied VP-Shunt (Ventriculoperitoneal Shunt) to determine shunt complication according to age, sex, location and type of complication. This study would help us to understand to decrease number of hydrocephalus patient's intrauterine life. Moreover, the purpose of my funding was to find what were the causes, indications and cure of patients with VP-Shunt complication. Furthermore, the very important purpose of my research was to take precaution for the pregnant mothers that their children should not born with congenital abnormality for instance, hydrocephalus. Meticulously, while I was writing

this paper, I had in mind to compare Afghanistan' VP-shunt complication cases with other countries particularly Wests Asian and South Asian countries and to contribute to the academia in particular of Nangahar and in general in Afghanistan.

### Research Methodology:

The method I have used in this paper is "Quantitative", with amalgamating with case series.

### Result:

There were '109' ventriculoperitoneal shunt procedures during the study period. Among them '38' consecutive patients who fulfilled the

inclusion criteria were enrolled for the study. To begin with, VP-Shunt complication according to sex: There were 20 males which made 52.6% of study, and 18 female patients that made 47.4% of study. Moreover, VP-Shunt complication according to Age: from one day to one month there were 2 patents that comprised (5.3%), age from 2 months to 2 years were 30 patients which made (78.3%) and age from 3 years to 14 years made were patients that were (15.8%). Furthermore, VP-Shunt complications according to location: We had found 26 complicated patients (68.4%) from Nangarhar province, 1 patient (2.6%) from Kabul, 4 patients (10.5%) from Kunar and Laghman provinces and 3 complicated patients (7.9%) from Nuristan province. Overall VP-Shunt complication: during this study we found 8 patients (21.1%) with abdominal pseudo cyst, 3 patients (7.9%) with skin irritation, 2 patients with (5.3%) fever, 8 patients (21.1%) with

shunt upper end and reserve infection, 6 patients (15.8%) with shunt lower end infection, 2 patients (5.3%) with disconnected shunt, 8 patients (21.1%) shunt tube lower end obstruction and 1 patient (2.6) with VP Shunt extrusion from month (real complication).

#### **Conclusion:**

The result of the study on 'VP-Shunt complications' elucidates that comparatively, the cases in males are more complicated than females. In addition, patients between two months to two years faced more complications. In extreme and high complications, such as pseudo-cyst, VP Shunt upper end (reservoir infection) and shunt lower end obstruction can be seen. In mid/average complications problems as in Shunt disconnection and skin irrational could be viewed. Finally, fever and extraction of shunt from mouth was rare complications.

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