

Nursing Care of Patients Undergoing Transphenoid Surgery An Observational Study

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Introduction

Transphenoidal approach for access to the pituitary gland is made possible by the development of micro-surgical techniques and equipment. Care has become more technically oriented, yet the physical, educational, spiritual and emotional needs of patients and the families have to be met. Transphenoidal surgery needs specific Nursing care. Today, patients' hospital stay tends to be getting shorter, so patient education is extremely important in ensuring continuity of care from the hospital to the home. This means that patients are expected to perform more self-care, including highly technical procedures. Nevertheless, from the hospital's point of view, home care is less expensive and infection risk is reduced.

Aim

(1) To select patients who undergo transphenoidal surgery to identify the problems faced by the patients and the specific Nursing care given to them.

(2) To give specific pre-operative and home care health teachings.

(3) To help the patients to

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perform more self-care activities and to reduce the risk of complications.

Indications

- (1) Pituitary adenoma: (a) Endocrine active (b) Endocrine inactive.
- (2) Cranio pharyngioma
- (3) Hypophysectomy.

Description of Procedure

The transphenoidal surgical approach is a way of gaining access to pituitary gland by means of an incision in the nasal septum. After the sphenoid sinus floor is resected the sella turcica floor is removed and the dura is incised. With the aid of

surgical microscope the pituitary gland is partially (or completely) removed (or) the offending tumor excised. A fat graft taken from the para umbilical region may be applied to the tumour bed for haemostasis and in case of CSF leak.

Common Neurologic Presentations

Loss of Vision;
Endocrine dysfunction:
Amenorrhoea; Galactorrhoea; Gigantism; Acromegaly; Hypopituitarism.

Neuro-Diagnostic Tests

Skull X-ray; C.T. Scan; Endocrine Studies; Visual field studies.

Table I
Patient's Information

Total Number of Patients: 15

Aspects	No.	%
Age:		
< 30 years	4	27
> 30 years	11	63
Sex:		
Male	10	67
Female	5	23
S/S of hypopituitarism	10	67
Excision of Tumour alone	13	87
Sub-Total removal of pituitary gland	2	13
C.S.F., Rhinorrhoea	2	13
Fat graft	4	26
Radio Therapy (post-op)	11	63
Depression	2	13
Headache	6	40

Nursing Care

It is the responsibility of the Neuro-Science Nurse to identify the problems to be aware of potential complications and to intervene specifically and promptly when necessary.

Common Problems Faced by the Patients

I. Pre-operative Phase: (i) Anxiety related to inadequate preparation for surgical procedure, fear of the unknown and false hope for a speedy recovery; (ii) Knowledge deficit related to the disease condition and the pre and post-operative care; (iii) Depression related to changes in body image and visual acuity.

II. Post-operative Phase: (i) Discomforts related to intubation, nasal packing and generalised headache, (ii) Fluid volume and electrolyte imbalance related to inadequate release of anti-diuretic hormone (or) Diabetes insipidus; (iii) C.S.F. Rhinorrhoea (or) C.S.F. leak through the back of the throat related to accidental arachnoid opening; (iv) Inadequate preparation for discharge related to lack of knowledge of post-operative course.

Pre-Operative Care

(i) *Anxiety:* (a) Patient's knowledge on various aspects related to disease condition; medical treatment plan; glandular functions were assessed on admission and documented. (b) Patient's readiness for the treatment was assessed and procedures were explained. (c) Pre-operative teachings were given and documented.

(d) Encouraged patients and the relatives to verbalize fears and concerns and misinformation was clarified.

(ii) *Pre-Operative Teachings:* (a) Preparation and routine: Investigations to be done; visit from anaesthetist, surgeon and other consents; starvation and physical preparation; early bath, valuables and the availability of the chaplaincy services.

(b) Knowledge of operating room and surgical procedures: Pre-medication; to or with Nurse in a stretcher; Expected length of procedure; Explain procedure with diagram; Fat graft from abdomen; Will wake up in ICU; Show where visitors can wait.

(c) Knowledge of what to expect in ICU: Nasal pack in both nostrils prevent cough, sneeze; O₂ Mask; to breath through mouth; I.V.; depression and pain on abdominal wound; can take oral fluids after 4 hrs. of surgery.

(d) Usual Course of Recovery: Transferred to own bed next morning; head end will be elevated; nasal pack will be removed in 3 days; bed rest for 7-10 days only if there is C.S.F. leak, otherwise, ambulated within 24 hrs.; incision heals in 10 days, sutures do not have to be removed; post-operative lab evaluations; central I.V. line for meningitis prophylaxis, if C.S.F. leak occurs during surgery; will be discharged 5th-7th post-operative day (depending on the problems faced).

(e) Possible Expectations and the Patient's Role: May void in large amounts; may get thirsty — report to Nurse; accurate intake and output record is necessary; void in bed pan; Drain from nose — salty taste in mouth, drip from

nose — report immediately; prevent cough, sneeze, nose blowing, nose picking and bending over from waist after the pack is removed; nose will be blocked for a couple of weeks after surgery; nasal drop to be instilled daily for a week or 10 days.

Post-Operative Care

(i) *Discomfort:* Headache was assessed. It was mostly generalised and while straining it is because of the block of the sinuses: Provided rest; head end was elevated; mild analgesics were administered; explanations about nasal sling was given; none of them complained about photophobia (if so, provide dark glasses in dark room).

(ii) *Fluid and Electrolyte Imbalance:* Lab values were assessed NA⁺, K⁺, Osmolarity, specific gravity - till 5th post-op. day B.D., thirst output chart was maintained accurately; weight was checked every day.

(iii) *C.S.F. Leak:* C.S.F. Leak was assessed when the patient had nasal pack and when it was removed also. (Patients do not have this problem if it does not occur during surgery): Instructed the patients not to sneeze, blow nose, cough (or) pick the nose; it was immediately reported if there was C.S.F. Leak; advised bed rest for 3-4 days if there was a leak; prophylactic antibiotics were given to prevent meningitis.

(iv) *Depression:* Explanations and reassurances were given; reference to psychiatrist given, if necessary; antidepressants were administered as per doctor's ad-

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vice; advised relations to be with the patient always.

(v) *Discharge Teachings:* (a) General: Patient's readiness for discharge was assessed; patients were given activity restrictions like: no flying X 3 wks, no swimming X 3 wks, to carry identification cards always; care of the operative site was instructed as earlier. (b) Knowledge of Hormone Replacement and Medications: DDAVP - Nasal spray; Demopressin - Nasal mucosa; Demopressin - Nasal mucosa; Aextate — takes a month to heal post-operatively; S/S of over dose; Fluid retention, weight gain, drowsy and confused; Restrict fluid, 3 glasses/day.

Thyroid Replacement: Eltroxin (or) cytomel; should be taken regularly; if not replaced, patient can

develop following S/S: Cold intolerance, weakness, slowness in activity, decreased mental activity.

Steroid: Explained the role of steroid in our body; mobilizes the body resources and makes them available for energy production; synthesis of new substances for maintenance of cellular life; phone to get infection (or) any other stress.

(c) *Radio Therapy:* R.T. is advised to prevent recurrence though it is not a malignant tumour: It takes five weeks of stay inside or outside the hospital; explain about the care of the R.T. site; Loss of hair, vomiting (side effects of R.T.).

(d) *Continued Follow-up:* Since this tumour may recur, it is very important; regular follow-up is necessary for the regulation of medications.

Summary

The Transphenoidal approach is becoming a more popular method of approaching pathology at suprasellar region. The Neuro-Science Nurse plays a major role in pre-operative care, the anticipation of complications during the post-operative phase and the home care of these patients.

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