

Nursing Care during Complications in Haemodialysis

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Haemodialysis is an important mode of therapy of renal failure especially for the end stage renal disease which is characterized by markedly elevated blood urea nitrogen, increased sodium, potassium, phosphate and decreased calcium and chloride level. It is the process in which the solutes from blood is removed from the patient's artery and pumped through a semipermeable cellophane membrane, while the dialysate flows on the outside of the membrane. The waste products of metabolism, water and electrolytes flow freely across the semipermeable membrane from the blood into the dialysate. Many complications can occur either due to procedure itself or technical problems (Fig. 1). But prompt action can prevent or minimize these complications. Following complications are known to occur quite frequently.

1. **Hypertension:** Decreased in the extracellular fluid can lead to hypovolemia resulting in hypotension. Keep ready intravenous Normal Saline (0.9%) or hypertonic saline (3%). Observe symptoms of increased sweating, pallor, feeling of warmth and restlessness. Record blood pressure every half hrly. Reduce transmembrane pressure to 0 mm of Hg. Withhold antihypertensive drugs in the morning of

dialysis unless patient is severely hypertensive.

2. **Hypertension and pulmonary oedema:** Sometime there is increased extracellular fluid, which can lead to hypertension and pulmonary congestion-causes dyspnea, coughing, raised J.V.P. and moist breathing. Raise the head end of the bed. Give O₂ inhalation, maintain ultrafiltration. Record the vitals and inform whenever required.

3. **Pyrogenic Reactions:** Ensure that there is no local swelling or discharge from shunt site before starting the procedure and use aseptic techniques while doing the dressing. Observe for chills and fever. Record temperature, give antipyretic drugs as prescribed if fever is there. Send blood and swab from tubing for cultures. Sometimes revision of shunt may be required.

4. **Disequilibrium Syndrome:** Watch for the signs of mental confusion, headache, nausea, vomiting and fits. Inform doctor and maintain adequate blood flow in order to prevent rapid changes in water, pH and osmolarity between circulation and C.S.F.

5. **Nausea and Vomiting:** Observe and record the vomitus. Ensure the tubings are intact during vomiting. Provide light and small feeds during procedure. Educate the patients to have light diet before dialysis.

6. **Bleedings:** Observe for dislodging of canula connections. Inform doctor. Watch for vitals. Be ready with drugs and blood transfusion.

7. **Clotting:** Check heparinisation instructions, check blood clotting time and record it half hrly. Inform doctor.

8. **Cardiac arrhythmias:** Monitor vitals. Check electrolytes especially in between the dialysis for K⁺ level. Check dialysate fluid for improper concentration of salts before starting and in between the procedure.

9. **Muscle Cramps:** Check blood Na⁺ level and conductivity. Check dialysate fluid for concentration, inform doctor.

10. **Anxiety and agitation:** Explain to the patient about the procedure. Make him comfortable. Provide diversional therapy e.g. music, television, magazines to read. Talk with him in between the procedure.

11. **Blood lead:** Observe the alarm of monitor and outflow dialysate fluid for colour and consistency. Inform doctor in case the column is red. Stop the procedure and replace the dialyzer. Important precautions should be taken while preparing the machine. Check the transmembrane pressure.

12. **Power failure:** Keep emergency light at hand. Open the monitor's flood flow cover and operate it

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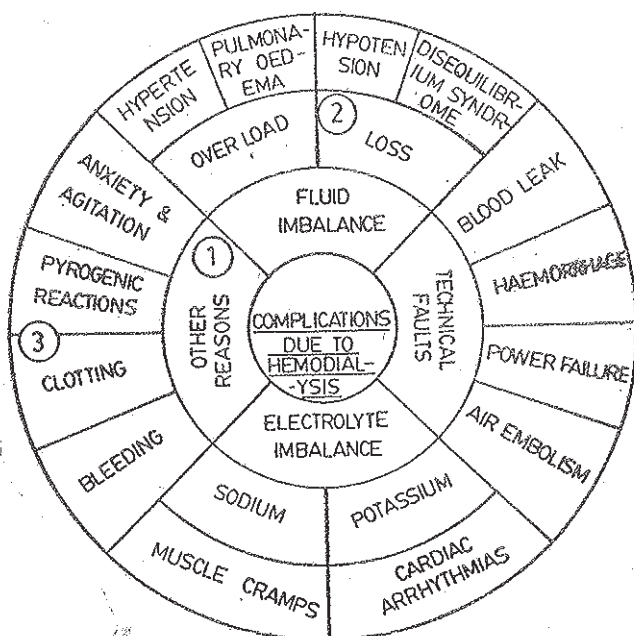


FIG. 1: COMPLICATIONS DURING HEMODIALYSIS
CIRCLE-1: CAUSES OF COMPLICATIONS
CIRCLE-2&3: RESULTING COMPLICATIONS

आवश्यकताओं से अवगत कराना ताकि वे उसकी उचित देखभाल कर सकें।

५. अवसर प्लास्टर लगे मरीज को लंबे समय तक किसी न किसी प्रकार दूसरों पर निर्भर रहना पड़ता है। अतः किसी भी प्रकार उसे उपयोगी बनाए रखना एवं रचनात्मक संभव क्रियाकलापों द्वारा उसकी शक्ति का संचय बहुत महत्वपूर्ण हो सकता है।

दवाएं एवं खान-पान संबंधी आवश्यकताएं

१. दवाओं के संबंध में पूरी जानकारी दें।

२. दवाओं के समय, मात्रा एवं अवधि साफ साफ बतायें। आवश्यकता पड़ने पर

उसे अपनी भाषा में लिखने का अवसर दें।

३. चिकित्सक से दुबारा मिलने की तिथि, समय, दिन एवं स्थान बताना न भूलें।

४. खान-पान के संबंध में प्रोटीन पदार्थ लेने की सलाह साधारण तौर पर दी जाती है जो दालों, सोयाबीन, मांस, मछली, अण्डे, दूध एवं पनीर आदि में पाया जाता है। प्रत्येक रोगी की आवश्यकता अलग-अलग होती है।

इस तकलीफ से जुड़े अन्य रोग भी खान-पान में परिवर्तन हेतु बाध्य कर सकते हैं।

५. खान-पान संबंधी सलाह देते समय ध्यान रखें कि रोगी को किस स्थान का

रहने वाला है उसकी आर्थिक स्थिति कैसी है एवं कौन से साधन उपलब्ध है।

प्लास्टर का निकाला जाना

निश्चित तिथि पर ही चिकित्सक की सलाह अनुसार इसे निकाला जाता है। कभी भी घर पर उसे निकालने का यत्न न करें। इसे निकालने की विधि, औजार एवं व्यक्ति की अपनी विशिष्टता होती है।

प्लास्टर निकालने के तुरन्त बाद शरीर का हिस्सा इतना चुस्त और मजबूत नहीं होता कि तुरन्त प्रयोग किया जा सके अतः धीरे-धीरे सावधानीपूर्वक आवश्यक चिकित्सकीय सलाह लेकर पुनः सक्रिय हुआ जा सकता है।

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manually till power returns.

13. *Air embolism*: Very rare complication but may arise during procedure. Check the air trap of machine. If it occurs, handle the situation with emergency.

Acknowledgement: I am thankful to Dr. K.L. Gupta, Lecturer in Nephrology, P.G.I., Chandigarh, for helping in preparation of this note.

SEW Workshop

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Workshop reports, their suggestions to meet the objectives of different states. The group became integrated very quickly and participation was extremely active and motivation was high. Participants also agreed to continue the post-Workshop projects and continue their study of "Leadership Development and Management Skills".

Finally, Mrs. Kingma awarded certificates to the participants. National Workshop concluded with the Valedictory function by participants. Mr. Rajasekharan, on behalf of the participants, expressed the view that on the whole participants were very satisfied. Mr Sundram proposed a vote of thanks to all those who contributed to the success of the programmes specially Mrs Kingma, Mr Prasz and Mrs. Nagpal for conducting the lectures and providing facilities. He said that the participants also acknowledged

that the organization of the national workshop was very well done. He also thanked Miss Durga J. Mehta for presiding over the workshop.

Mrs. Rita Sarkar

Health Education and Role of Nurse

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4. Now, the time is to implement the process as the patient or relative is ready to learn. This is in terms of influence by personal factors, which play a major role in the learning process. The Nurse should plan carefully before practicing the Nursing procedure on the patient.

5. Once the process is completed, though at every stage it is evaluated, the final evaluation is to verify how far the set goal is achieved. The Health Education process involves reassessment at every stage.

Today, Health Education has the responsibility of Government

and there are Bureau of Health Education in all State Health Directorates. The Press and Radio and Television are very active now-a-days in Health Education work.

Students' Forum

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The cause of this SNA activity was a national cause, it was decided to give Rupees three thousand only towards the Prime Minister's Relief Fund, this whole decision taken by an official committee of five members from SNA Unit itself.

We were even more proud when as our representative Miss Kalpana G. Dhomse, Nursing Tutor, had the honour to personally present the amount of Rs. three thousand and one of the Honourable Prime Minister, on October 13, 1989 at Parliament House, New Delhi.

The Prime Minister conveyed his deep gratitude and personal thanks to the student nurses of the School of Nursing, S.S.G. Hospital, Baroda, for their hard work.