WOUND CARE: DRAINS

WOUND DRAINAGE SYSTEMS

Keywords: wounds, wound drain, wound healing, closed drain, open drain

AIM

- To remove body fluids, preventing fluid accumulation and assisting wound healing.\(^1\)

BACKGROUND INFORMATION

A drain describes any material or equipment used to prevent the formation of a haematoma or to carry fluid from inside the body to the surface. Allowing unwanted fluid or blood to remain in a wound may be a potential source of infection and may also impede healing, or result in wound breakdown and dehiscence.

Wound drains are classified as closed or open drainage systems.

1. **Closed drains** do not expose the contents to the atmosphere. They include vacuum drains which apply negative pressure such as the Varivac (variable pressure), Privac (high pressure), Concertina (low pressure),\(^1\) Redivac\(^\text{®}\), or non-vacuum systems such as the T-tube drain.\(^2\) The drain is often secured externally with a suture.\(^1\) The use of a closed drain system lowers the risk of potential infection for patients and reduces staff contact with body fluids.

2. **Open drains** allow communication with the atmosphere.\(^1\) These drains include corrugated, Penrose, Yeates,\(^1\) and sump drains.\(^2\) Open drains are inserted directly into the wound bed and they drain into a dressing. As they have an open end there is increased potential for infection. Open drains are usually secured by a suture and may have a safety pin attached close to the skin.

KEY POINTS

GENERAL

1. Ensure the drain bottle is supported, so it does not pull (for patient comfort), and is below wound height.\(^1\) The drain may rub against nearby tissue which can be painful.\(^1\)

2. Tubing should not be kinked or be under tension to ensure free flow of drainage fluid and minimise the risk of accidental dislodgement. Drains should be unclamped.\(^1\)


4. An aseptic technique is required when caring for and removing drains to prevent infections and post-operative complications.\(^3\)

5. Drain canisters can be changed when full or if there is loss of suction (if on vacuum). Use an aseptic technique for changing the canisters.\(^1\) See O&G, Wound Care: Drain Wound Suction Pre-Vacuumed System Management.

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\(^1\) All guidelines should be read in conjunction with the Disclaimer at the beginning of this manual

\(^2\) King Edward Memorial Hospital

\(^3\) Obstetrics & Gynaecology
6. When changing dressings, ensure the drain remains in situ. See aseptic dressing technique within Clinical Guidelines, O&G, Wound Care, Dressing: Simple.

7. Blocked drains must be reported to the medical team as soon as possible and a patient review arranged.

**ASSESSMENT & DOCUMENTATION**

8. Assess and document the type and number of drains, suction, drainage, volume, colour, and description of drainage:
   - Sanguineous- bright red;
   - Serosanguineous / Haemoserous- pink- usually appears a few hours post-op and decreases over time;
   - Serous fluid- clear/straw coloured;
   - Purulent- thick yellow or grey/green, malodorous;
   - Chyle- cloudy/milky white lymph drainage).

9. Monitor the amount and type of drainage with post-operative observations or as clinically indicated. Monitor the drainage bottles 4 hourly in the first 24 hours after insertion. The frequency of monitoring is adjusted according to the clinical situation.
   - Closed vacuum systems should be assessed regularly, with a minimum of 4 hourly assessments in hospital (PRN & daily in community) for the presence of continued intended vacuum and volume/ consistency of fluid drained. Vacuum systems may need to be changed or suction used to re-establish a vacuum.
   - Open drain dressings must be assessed regularly and changed if wet. It may be necessary to weigh the dressings before and after changing to accurately assess the amount of drainage. Make note of any signs of wound infection or maceration, particularly if there is excessive drainage fluid making prolonged contact with the surrounding skin. Document as for Closed Vacuum Drainage.

10. Fluid drainage should be measured and recorded on the 24 hour fluid intake/ output medical record (where applicable) and integrated progress notes. As a minimum, mark the drain fluid level with a line, date and time at 2400hrs each day or as specified by medical team (e.g. 0700hrs).

11. Excessive drainage must be reported to the medical team. Drainage may be blood stained immediately following surgery, but then becomes serousy. Any blood stained drainage or blood clots may indicate haemorrhage. Document the amount and colour of any drainage on the MR 286- Gynaecology Observation chart or MR 249.61Caesarean Birth Clinical Pathway. Consider contacting the medical team.
   - If the amount is >100mL in 1 hour: Perform vital sign observations, inform the shift co-ordinator and request medical staff review.
If there is no drainage or the presence of swelling and increased pain: Perform vital sign observations, assess the wound and drain patency, and notify the medical staff.¹

**SIGNS OF INFECTION**

12. Monitor the wound and drain insertion site for signs of infection (e.g. inflammation, pain, redness, swelling, heat, discharge) and notify the medical staff if signs are present.¹

13. A specimen/swab for culture and sensitivity should be collected from the drain site if there is presence of purulent discharge or an inflamed site.¹,² See also O&G, Wound Care, Collection of a Wound Swab.

**DRAIN REMOVAL/ SHORTENING - SEE O&G: WOUND CARE DRAIN REMOVAL**

14. Prior to shortening or removal of drains, ensure there is a documented medical order, and that the suction device is off 5 minutes before procedure and the suture removed, to prevent trauma to the tissues and pain to the patient.¹

15. The timing of the drain removal or shortening will depend on the clinical situation and post-operative instructions from the medical staff.¹

16. All drains should be assessed to ensure they are complete after removal. Any suspected incomplete drains or missing fragments must be reported to the medical staff immediately for review.²

17. The removal of drains must be signed off in the operative notes MR 310 Caesarean Section or MR 315 Operation Record.

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**REFERENCES / STANDARDS**


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National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice; 3- Preventing and Controlling Healthcare Associated Infections; 6- Clinical Handover; 9- Recognising & Responding to Clinical Deterioration in Acute Health Care

Legislation -

Related Policies -

Other related documents – Clinical Guidelines, O&G, Wound Care: Wound Drains: Wound Suction Pre-vacuumed System Management; Drainage Tubes: Shortening; Drainage Tubes: Removal; Drains- Vaginal: Removal; Vaginal T-Tube: Removal

**RESPONSIBILITY**

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(A7.2.1) All guidelines should be read in conjunction with the Disclaimer at the beginning of this manual Page 3 of 4
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