Postoperative wound infections

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The majority of wound infections arise from endogenous sources within the patient, but exogenous SSIs may also occur HOSPI TA L _____ __ __ ____ ____ _ __ ____ __ _____ DA DA TE OF BIR TE OF BIR TH TH UNIT NO UNIT NO YEAR WARD SURNAME SURNAME SEX SEX CONSUL CO CONSUL T T ANT ANT FIRST NAMES FIRST NAMES JJ ff BOWELS: 0 0 0 0 MONTH AUGUST th th th th th th th DAY 6 7 8 9 10 11 12 5 0 0 0 HOURS 11 11 22 25 14 6 17 23 11 11 09 22 22 22 6 23 10 7 06 18 1 0 0 21 0 0 3 0 0 0 0 0 0 30 7 17 0 T MINUTES TIME 17 30 0 0 06 17 0 0 0 0 0 0 0 0 30 0 40.5 40.0 39.5 Fan therapy 39.0 Fan therapy 38.5 CELSIUS) ∞ 38.0 20-30 37.5 TURE (37.0 36.5 TEMPERA 36.0 35.5 35.0 170 34.5 160 34.0 150 140 130 120 PULSE PER MINUTE 110 100 90 80 70 60 50 40 TION PER MINUTE 30 20 RESPIRA 10 Figure 5.13 related to poor hospital standards. Strict attention to ward cleanliness, gloving before touching patient wounds and hand - washing between all patient contacts are important preventive measures. An outbreak of wound infections on the ward with bacteria having the same antibiotic sensitivity profile implies an exogenous source of infection, which needs to be investigated by swabbing all sta ff and work surfaces. It may need temporary ward closure and a deep clean to eradicate the infection source. Now that patients are discharged more quickly after sur - gery and many procedures are performed as day cases, many SSIs are missed by the surgical team unless they undertake a prolonged and carefully audited follow-up with primary care doctors. Suppurative wound infections take 7–10 days to elop, and even cellulitis around wounds caused by inva - dev sive organisms (such as β - haemolytic Streptococcus) takes 3–4 days to develop. Major surgical infections with systemic signs (Figure 5.13), evidence of spreading infection, cellulitis or bacteraemia need treatment with appropriate antibiotics. The choice may need to be empirical initially but is best based on culture and sensitivities of isolates harvested at surgery or from e of wound fluids or wound swabs. Although the iden - cultur tification of organisms in surgical infections is necessary for audit and wound surveillance purposes, it is usually 2–3 days before sensitivities are known (Figures 5.14 and 5.15) . It is illogical to withhold antibiotics until results are available but, if clinical response is poor by the time sensitivities are known, then antibiotics can be changed. Such changes are unusual if choice of antibiotics is sensible; change of anti - the empirical biotics promotes resistance and risks complications, such as C. di ff . enteritis. If an infected wound is under tension, or there is clear evi - dence of suppuration, sutures or clips need to be removed, with curettage if necessary , to allow pus to drain adequately . In severely contaminated wounds, such as an incision made for drainage of an abscess, it is logical to lea ve the skin open. Delayed primary or secondary closure can be undertaken when the wound is clean and granulating (Figures 5.16 and 5.17) . 250 240 Some heavily infected wounds may be left to heal by secondary 230 intention, with no attempt at closure, particularly where there 220 210 is a loss of skin cover and healthy granulation tissue develops 200 190 BLOOD PRESSURE mmHg 180 170 160 150 140 130 120 110 100 90 80 70 60

Figure 5.14

Classic swinging pyrexia related to a perianastomotic wound abscess that settled spontaneously on antibiotic therapy. Mixed streptococcal infection of a skin graft with very poor ‘take’.

Figure 5.15 Figure 5.14 (a) (b) Figure 5.16 (a, b) Figure 5.17 that can always be revised with plastic surgery under clean surgical conditions at a later stage (Summary box 5.13). Summary box 5.13 Surgical incisions through infected or contaminated tissues /uni25CF /uni25CF /uni25CF When taking pus from infected wounds, specimens should be sent fresh for microbiological culture. Swabs should be placed in transport medium, but the larger the volume of pus sent, the more likely is the accurate identification of the organ - ism involved. Providing the microbiologist with as much infor - mation as possible and discussing the results with them gives the best chance of the most appropriate antibiotic treatment. If bacteraemia is suspected, but results are nega tive, then repeat specimens for blood culture and an immediate Gram stain. Topical antiseptics should only be used on heavily con - taminated wounds for a short period to clear infection as they inhibit epithelial ingrowth and so impair wound healing.

After 5–6 days of antibiotics, the infection shown in is under control, and the skin grafts are clearly viable. Delayed primary closure of a fasciotomy wound after 3–5 days. Skin layers left open to granulate after laparotomy for faecal peritonitis, ready for skin grafting. When possible, tissue or pus for culture should be taken before antibiotic cover is started The choice of antibiotics is empirical until sensitivities are available Heavily contaminated wounds are best managed by delayed primary or secondary closure

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