Misuse of antibiotic therapy with the risk of resi

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Many staphylococci today have become resistant to penicillin. Often bacteria develop resistance through the acquisition of β -lactamases, which break up the β -lactam ring present in the molecular structure of many antibiotics. The acquisition of extended-spectrum β -lactamases (ESBLs) is an increasing concern in some Gram-negative organisms that cause urinary tract infections because it is di ffi cult to find an antibiotic y e ff ective against them. In addition, there is increasing concern about the rising resistance of many other bacteria to anti - - biotics, in particular the emergence of methicillin-resistant Staphylococcus aureus (MRSA), which is very relevant in general surgical practice. The introduction of antibiotics for prophylaxis and for treatment, together with advances in anaesthesia and critical care medicine, has made possible surgery that would not pre - viously have been consider ed. Faecal peritonitis is no longer inevitably fatal, and incisions made in the presence of such contamination can heal primarily without infection in over 90% of patients with appropriate antibiotic therapy . Despite Penicillium notatum in 1928.

(b)

closure in patients in whom the wound is known to be contam inated or dirty . Waiting for the wound to granulate and then performing a delayed primary or secondary closure may be considered a better option in such cases (Summary box 5.2 Summary box 5.2 Advances in the control of infection in surgery /uni25CF /uni25CF /uni25CF SSI in patients who have contaminated wounds, who are immunosuppressed or who are undergoing prosthetic surgery is now the exception rather than the rule since the introduc tion of prophylactic antibiotics. The evidence for this is of the highest level. The use of prophylactic antibiotics in clean, non-prosthetic surgery is of less value as infection rates are low and the indiscriminate use of antibiotics simply encourages the emergence of resistant strains of bacteria.

Aseptic operating theatre techniques have enhanced the use of antiseptics Antibiotics have reduced postoperative infection rates after elective and emergency surgery Delayed primary, or secondary, closure remains useful in heavily contaminated wounds

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