**Initial implementation of a prophylactic antibiotic program in thyroid surgery at a tertiary oncology hospital in Vietnam**

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**Background and aims.** Thyroid surgery is generally classified as clean, with a surgical site infection (SSI) rate under 1%. While most international guidelines no longer recommend antibiotics for thyroid surgery, some Asian countries still advocate prophylaxis. In Vietnam, no standardized guideline exists for antibiotic use in thyroid cancer surgery, as cancer may require broader and deeper lymphadenectomy. A 2024 survey at Hanoi Oncology Hospital showed that 91 postoperative thyroid surgery patients received antibiotics for an average of 2.37 ± 0.63 days, and 80.2% were prescribed antibiotics at discharge. In response, the hospital implemented a prophylactic antibiotic program to optimize use. This study aimed to assess its effectiveness.

**Methods.** A prospective interventional study was conducted in June 2025 on 145 patients undergoing clean or clean-contaminated thyroid surgery. All received a single dose of cefazolin within 30 minutes prior to skin incision. SSIs were assessed at discharge and 30 days postoperatively via patient interviews.

**Results.** The average patient age was 46 years. Among them, 65.5% had non-metastatic thyroid cancer, 2.8% had metastatic disease, and 31.7% were preoperatively diagnosed with benign thyroid tumors. The most common procedure was total thyroidectomy with cervical lymph node dissection (67.6%). All patients (100%) received a single dose of cefazolin within 30 minutes before skin incision. A small subset (9.7%) received additional doses due to extensive surgical invasion, significant edema or bleeding, or multiple infection risk factors. Postoperative antibiotic use was significantly reduced to 0.14 ± 0.59 days (excluding the day of surgery). At discharge, no patients had surgical site infections; only one (0.7%) had mild bleeding and wound edema. At 30-day follow-up, the SSI rate remained 0%.

**Conclusion.** The implementation of prophylactic antibiotics showed that most patients (90.3%) required only a single pre-incision dose of a first-generation cephalosporin. The absence of postoperative surgical site infections highlights the effectiveness of this antimicrobial stewardship initiative.