



## Service Priorities and Programmes Electronic Presentations

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### **Parenteral NSAID at General Out-patient Clinic/ First Aid Post: usage and safety issues**

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#### **Keywords:**

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#### **Introduction**

NSAID is a common analgesic choice in primary care settings. In every GOPC, various kinds of oral NSAIDs were available. Some clinics, for example the Tai O Jockey Club GOPC (TOJCC) which provides regular GOPC session plus 24-hour emergency services for the local population, stocked Intramuscular Diclofenac (Voltaren) for prescription. Parenteral NSAID is effective for pain relief. However, the safety issues especially the known gastrointestinal (GI) adverse effects as well as the renal side effects should be carefully considered before administering the parenteral NSAID to avoid potentially serious complications.

#### **Objectives**

To evaluate the use, indications, and the safety issues associated with the parenteral NSAID use at the TOJCC in 2015 over a one year period.

#### **Methodology**

Parenteral Voltaren prescription records were reviewed from January to December 2015. All intramuscular injections (IMI) records were included for analysis. Records containing the pseudo-ID (such as emergency registration at the FAP without identity card registration) were excluded. Total 74 IMI valid records were retrieved over a one year period for analysis.

#### **Result**

70% of the injections were administered at the GOPC session and 30% were administered at the FAP session. The dose ranged from 25 to 75 mg per injection. The age of patient receiving the IMI ranged from 21 to 94 year-old with over 60% of injection records were administered to elderly aged over 70 year-old. The most common indication was acute joint pain (35% N=26 injections), followed by low back pain (22% N=16 injections) and dysmenorrhoea (20% N=15 injections). Other indications included tendinitis/ gingivitis/ fracture etc (23% N=17 injections). Most

patients could be discharged home after the IMI (86% N=64) while a small portion of patients had to be referred to Accident & Emergency Department (AED) despite the IMI (14% N=10). Renal risk: 3 patients (M/69 IMI 50 mg; F/76 IMI 50 mg; F/89 IMI 25 mg) experienced documented renal impairment with serum creatine rise (up to 168%) after the IMI. All of them experienced an uneventful recovery afterwards. GI risk: 47% of the patients receiving IMI had concomitant use of aspirin, of which 20 out of 35 (57%) was covered by PPI and 14 had existing GI conditions such as history of gastric ulcer or Barrett esophagus (100% were covered with PPI). 2 patients had documented GI adverse effects were analyzed. One developed gastric ulcer confirmed by OGD after receiving IMI Voltaren 50 mg for OA knee. Another developed significant haemoglobin drop from 8.5 to 5.8 g/dL over a month after receiving IMI Voltaren 25 mg for knee arthritis and gout attack (IMI was repeated within 2 weeks at 25 mg). Subsequent endoscopies revealed esophagitis and gastric ulcer. Both patients had an uneventful recovery after withholding NSAID/ aspirin use. Others: one patient experienced local bruising over the IMI site after receiving 50 mg Voltaren for low back pain. Discussions: most patients could be managed at the GOPC/ FAP setting and discharged after the IMI while only a small portion of cases (14%) had to be referred to AED. Although the absolute adverse event rate is low, the consequence of NSAID induced risk could not be overlooked. It could be suggested avoiding repeated NSAID IMI over a short period, reducing NSAID dosage and PPI coverage may be considered in the patient at risk such as elderly, concomitant aspirin use, renal impairment, known pre-existing GI conditions etc. Alternative analgesic approaches e.g. non-NSAID, Physiotherapy support, early follow-up etc. may be strategies to achieve pain control as well as to improve the safety outcomes.