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ORIGINAL RESEARCH

Pattern of Analgesic Use among Public Customers and their Awareness about its Side Effects

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ABSTRACT: Pain is defined by world health organization as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage." The inclusion of the word "emotional" is crucial for the understanding of the implications of pain perception by a subject. The obvious consequence of this is that that pain perception is unique to each individual, as well as pain threshold is different in subjects. Pain is common medical problem and can lead to impaired functionality, depression and a lower quality of life. Mild to moderate acute pain is treated with acetaminophen (paracetamol) and non-steroidal anti-inflammatory drugs as first-line agents. Non-steroidal anti-inflammatory drugs as first-line agents are generally categorized as: a) non-selective compounds which inhibit both cyclooxygenase enzyme1 and cyclooxygenase enzyme 2. In this study, we investigated the most common types of analgesics used by the customers, the common pain in which analgesics are used, and the knowledge of the most important side effects resulting from the use of these analgesics. The study was conducted at private pharmacies in Derna city .it is survey study (prospective sample) depended on a questionnaires that were distributed on pharmacies during the period July-September 2022. The data was collected and an analysis was carried out. The

results showed that the most common analgesics were Paracetamol and ketofan, the most common pains in which these analgesics used for are headaches and dental pain, followed by dysmenorrhea and back pain. As for the side effects, they ranged from upset stomach (indigestion) Peptic ulcers, sleep, constipation and nausea. Conclusion: The most commonly used pain reliever was paracetamol, while the most common pain was headache, and the most common side effect was stomach upset (indigestion).

KEYWORDS: Analgesics, Side effects, Paracetamol, Non-Steroidal Anti-Inflammatory Drugs.

INTRODUCTION

Pain is a frequent medical condition that can affect daily functioning, cause depression, and diminish quality of life.

Acetaminophen and non-steroidal anti-inflammatory medications are first-line treatments for mild to moderate acute pain.

NSAIDs are generally categorized as: a) non-selective compounds which inhibit both cyclooxygenase (COX)-1 and COX-2 enzymes; b) COX-2-selective drugs, also known as coxibs, which are associated with a lower risk of gastrointestinal bleeding than non-specific NSAIDs (Ingrasciotta et al. 2019) .

Due to their strong anti-inflammatory action, NSAIDs are generally indicated in pain of inflammatory origin.(Ingrasciotta et al. 2019) .

Oral formulations, which include paracetamol, non-steroidal anti-inflammatory analgesic agents and opioids, are among the medications commonly prescribed to patients to manage pain (Moore et al. 2018).

-Non-steroidalanti-inflammatory medications (NSAIDs) are commonly used to regulate edema and tissue damage brought on by inflammatory joint disease (arthritis).

A number of these drugs possess antipyretic activity in addition to having analgesic and anti-inflammatory actions, and thus have utility in the treatment of fever (L.J. 2013).

NSAIDs inhibit cyclooxygenase (COX) – the enzyme which converts of arachidonic acid into prostaglandins and thromboxanes, Arachidonic acid is mainly found in the cell membrane, where it is bound to phospholipids.

Physical, chemical or mechanical stimuli (tissue damage, hypoxia, immune processes, etc.) induce arachidonic acid release and metabolization.

The resulting metabolites (prostaglandins and thromboxanes) exert effects on practically all body organs and tissues. Figure (1). (Roda et al. 2007).

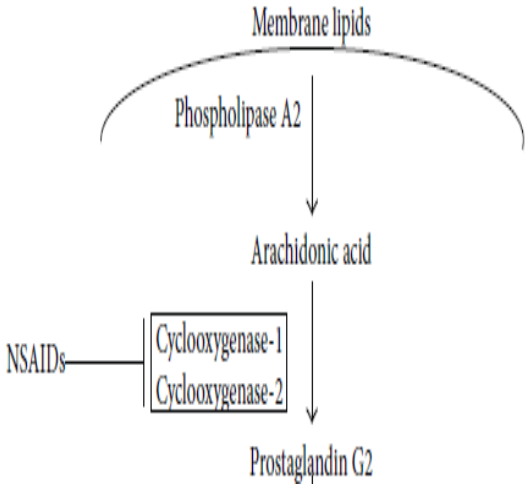

Figure (1): Mechanism of action of NSAIDs.(Ishiguro and Kawahara 2014)

The most common side effects of NSAIDs range from indigestion to gastritis, ulcers and gastrointestinal bleeding and can be significantly reduced by using proton pump inhibitors such as omeprazole or pantoprazole.(Devi et al. 2020)

MATERIALS AND METHODS

The study was conducted at private pharmacies in Derna city .it is survey study (prospective sample) depended on A questionnaires were distributed on pharmacies. The data was collected and an analysis of this data was carried out.

About 123 questionnaires were collected and their data was analyzed. The questionnaire was contain many information such as demographic (Age and ginder), name of medication, what type of pain is the medication used for, time to take medicine (with meal, before meal or after meal), in addition to the side effect of the medication.

RESULTS AND DISCUSSION

The results of the analysis showed that the average of age was 33 year with range (15-82 year) while the ginder percent was 70 % and 30% for female and male respectively, the results showed that the most widely used analgesic were Paracetamol with a percentage of 34.95 %, followed by ketofan , Diclofenac, tramadol with 17.88%, 13.0% and 6.50 respectively, While the percentage of using aspirin, Brufeen and indomethacin was approximately equal, with a percentage of 5.69 % As shown in figure 2. Sometimes patients use more than one analgesic, such as paracetamol and diclofenac.

Regarding the most common pain for which these analgesics were used, according to the results of the questionnaire, they were headache, dental pain , dysmenorrhea pain and back pain with 43.90%, 17.07 % 16.26% and 11.38% respectively as shown in table1, While Figure 3 shows all types of pain that were calculated through the questionnaires. As for the side effects, they ranged from upset stomach (indigestion) with 39.02%, ulcers and sleep with 3.25 % while constipation and dizziness with 1.62%.and nausea 2.43%. As shown in Figure 4. On other hand were about 53.65 % of patient without side effect. The most common side effect was an upset stomach, and the most common analgesic associated with it was paracetamol. Through the questionnaire, we were able to determine the time during which patients take analgesics Most of the patients were taking analgesics after meal with 51.21 % while the percentage of people who take analgesics with or before the meal is 34.96 and 13.82 % respectively. As shown in Figure 5. Although NSAIDs are commonly to be taken without regard to food, prescribers recommend administering them with food to reduce their propensity for GI adverse events. When comparing the results of this research with previous study, we found that in a study in Nigeria on Prescriptions involving analgesic drugs at a secondary health facility in Ibadan, Nigeria the result was paracetamol was the most commonly prescribed analgesic and this is consistent with the findings of this research (Fehintola and Ganiyu 2011)

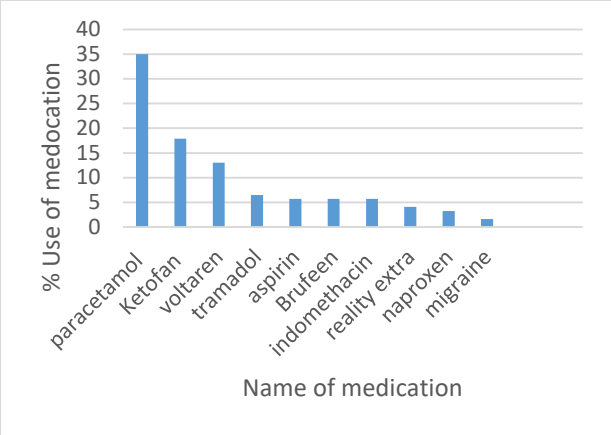

Figure (2): Name and percent use of medication

Table (1): Common Types of Pain

Type of pain	Percent of pain (%)
Headache	43.90
Dental pain	17.07
dysmenorrhea pain	16.26
Back pain	11.38

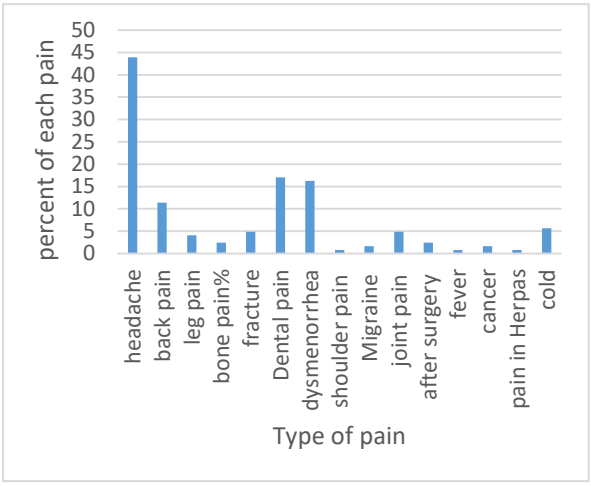

Figure (3): All Types of Pain.

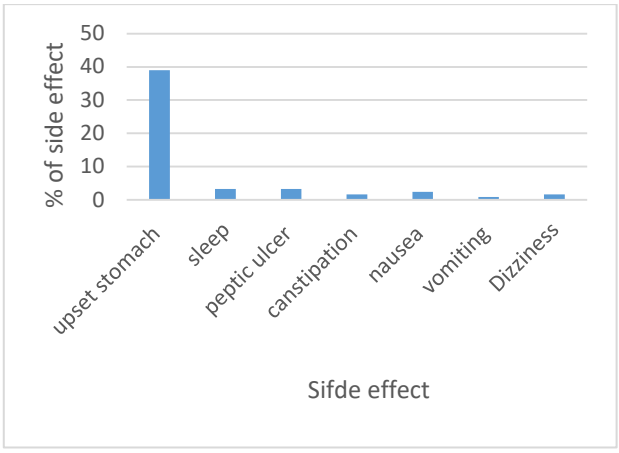

Figure 4: Common Side Effects of Analgesic Medications

CONCLUSION

In this study, we investigated in terms of the advantages of using analgesics, in the treatment of various types of pain, in addition to the side effects that may be induced in the gastro intestinal tract and kidneys due to the use of analgesics for long period.

As these painkillers relieve pain, they also have side effects that must be paid attention to when using these painkiller.

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الملخص

تُعرّف منظمة الصحة العالمية الألم بأنه "تجربة حسية وعاطفية غير سارة مرتبطة بتلف الأنسجة الفعلي أو المحتمل، أو موصوفة بمصطلحات تُشير إلى هذا التلف". يُعدّ تضمين كلمة "عاطفي" أمرًا بالغ الأهمية لفهم دلالات إدراك الألم لدى الفرد. والنتيجة البديهية لذلك هي أن إدراك الألم يختلف من شخص لآخر، كما أن عتبة الألم تختلف بين الأفراد. يُعدّ الألم مشكلة طبية شائعة، وقد يؤدي إلى ضعف الأداء الوظيفي، والاكتئاب، وتدني جودة الحياة. يُعالج الألم الحاد الخفيف إلى المتوسط باستخدام الباراسيتامول (أسيتامينوفين) ومضادات الالتهاب غير الستيرويدية كخط علاج أولي. تُصنف مضادات الالتهاب غير الستيرويدية، كخط علاج أولي، عمومًا إلى: أ) مركبات غير انتقائية تثبط كلًا من إنزيم سيكلوأكسيجيناز 1 وإنزيم سيكلوأكسيجيناز 2. في هذه الدراسة، بحثنا في أكثر أنواع المسكنات شيوعًا بين المرضى، وأنواع الآلام الشائعة التي تُستخدم فيها هذه المسكنات، ومعرفة المرضى بأهم الآثار الجانبية الناتجة عن استخدامها. أُجريت الدراسة في صيدليات خاصة بمدينة درنة، وهي دراسة مسحية (عينة مستقبلية) اعتمدت على استبيانات وُزعت على الصيدليات خلال الفترة من يوليو إلى سبتمبر 2022. جُمعت البيانات وحُللت. أظهرت النتائج أن أكثر المسكنات شيوعًا هي الباراسيتامول والكيتوفان، وأن أكثر الآلام شيوعًا التي تُستخدم فيها هذه المسكنات هي الصداع وآلام الأسنان، يليهما عسر الطمث وآلام الظهر. أما بالنسبة للآثار الجانبية، فقد تراوحت بين اضطراب المعدة (عسر الهضم)، وقرحة المعدة، واضطرابات النوم، والإمساك، والغثيان. الخلاصة: كان الباراسيتامول أكثر مسكنات الألم استخدامًا، بينما كان الصداع أكثر الآلام شيوعًا، وكان اضطراب المعدة (عسر الهضم) أكثر الآثار الجانبية شيوعًا.

الكلمات المفتاحية: مسكنات الألم، الآثار الجانبية، الباراسيتامول، مضادات الالتهاب غير الستيرويدية.