Nsaids Gastropathy/Dyspepsia Upon Chronic Gastritis In Anamnesis In Patients With Osteoarthrosis

M. Y. Zak, L. M. Pasiyeshvili, M. Y. Knysh

Abstract: 122 patients with osteoarthrosis, who had verified chronic gastritis in the anamnesis (50 males and 72 females), aged from 42 to 64, were examined. Control group included 40 patients with osteoarthrosis without gastroduodenal zone pathology in the anamnesis. For arthralgia relief, patients were prescribed to intake meloxicam (average dose — 12.5±1.39 mg/day) or nimesulide (average dose — 150±14.91 mg/day). As a result of this research, it was determined that prescription of selective NSAIDs (meloxicam and nimesulide) raised the risk of NSAIDs gastropathy/dyspepsia in 2.9 times (P<0.03) in patients with chronic gastritis in the anamnesis than in patients without associated gastroduodenal zone pathology. Atrophy of gastric mucous membrane was associated with higher risks (P>0.05) of erosive gastropathy. With the purpose of gastropathy prevention upon taking NSAIDs, patients with chronic gastritis in the anamnesis are recommended to undergo gastroprotective therapy.

Index Terms: Chronic Gastritis, NSAIDs Gastropathy, NSAIDs Dyspepsia.

1 Introduction

The problem of gastrointestinal safety upon the use of non-steroidal anti-inflammatory drugs (NSAIDs) in patients with chronic gastroduodenal pathology is largely unsolved issue of today. It has been conclusively proved that the presence of an ulcer disease (peptic ulcer) in the anamnesis seems to be one of the leading risk factors of NSAIDs gastropathy and related gastric bleedings [1]. However, the question of the gastropathy/dyspepsia risk during NSAIDs therapy in patients with chronic gastritis (CG) in anamnesis remains debatable. Upon CG, as well as upon ulcer disease, the leading mechanism of forming pathological process is represented by the imbalance in activation of aggression factors and reduction of the protective components of the gastric mucous membrane [2]. Osteoarthritis (OA) is the most common rheumatic disease. OA in women leads to the reduction of life expectancy at the average of 10–15 years, which is primarily stipulated by the intensity and duration of pain. Adequate analgesia using NSAIDs is a strategically important component of OA treatment. With the aim of arthralgia relief in OA, patients take these drugs for a few days up to several months. NSAIDs intake is often carried out “on demand” in cases of increased physical activity, etc. Daily dose of preparation is chosen by titration in order to achieve the analgesic effect [3], [4].

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2 Materials and methods

We examined 122 patients with OA (50 men and 72 women), having verified CG in anamnesis, aged from 42 to 64 (mean age — 49.65±3.51). Depending on the morphological form of gastritis, patients were divided into two groups: group 1 consisted of 54 patients with non-atrophic gastritis (NAG) in combination with OA; group 2 included 68 patients with atrophic gastritis (AG) in combination with OA. Group 3 was made of 40 patients with OA without concomitant gastroduodenal pathology in anamnesis. CG was diagnosed on the basis of Sydney-Houston classification and OLGA-staging [5], [6]. OA diagnostics was conducted in accordance with approved international guidelines [4]. The study included only H.pylori-negative patients (eradication was carried out in the initial examination). For arthralgia relief, patients were recommended to intake such selective NSAIDs as meloxicam (average dose — 12.5±1.39 mg/day) or nimesulide (average dose — 150±14.91 mg/day). Daily dose was calculated taking into account the fact that patients received different NSAIDs doses on different days, depending on the severity of the articular syndrome. The present study was conducted in connection with a treatment of acute gastroduodenal pathology. Diagnostics of NSAIDs gastropathy was based on gastroduodenoscopy, which was performed for all the patients examined, who appealed about abdominal pain or dyspepsia.

3 Results

Most patients (102) had been initially diagnosed to have CG which was later accompinied by OA. Less commonly, in 20 cases, OA verification preceded CG. This is due to the fact that CG usually occurs at the young age, while OA is typical for the middle and older age groups. At the same time, CG may be asymptomatic for a long time, but when patients apply for medical care, they have already had atrophic changes in the gastric mucous membrane. It is in such cases OA had been diagnosed earlier than CG. As a result of the NSAIDs use, dyspepsia was being developed in 31 (57.4%) patients, gastropathy — in 9 (16.7%) patients of group 1. Gastropathy and dyspepsia

were detected in 15 (22.1%) and in 35 (51.5%) patients of group 2, respectively. Noteworthy was the fact that erosive lesions of the gastric mucous membrane in the form of NSAIDs gastropathy were observed 1.3 times more frequently in patients with AG than upon NAG (Fig. 1). At the same time, the frequency of adverse effects upon NSAIDs intake in patients with OA without gastroduodenal pathology was considerably lesser. Thus, dyspeptic syndrome developed 2.9 times (χ^2=26.0; P=0.02) and 2.6 times lesser (χ^2=94.35; P=0.03) in group 3 as compared with groups 1 and 2, respectively, while gastropathy — 3.3 times (χ^2=84.33; P=0.009) and 4.4 times (χ^2=36.78; P=0.002) lesser than in groups 1 and 2, respectively (Fig. 1) Duration of patients' follow-up before symptoms of gastroduodenal pathology ranged from 1 week to 3 months. However, in the majority — 28 (70.0%) of 40 and 39 (78.0%) of 50 patients of groups 1 and 2, respectively — complaints of "gastritic" character were being developed during the first month of the start of NSAIDs intake. At the same time, upon OA without comorbidity, the syndrome of abdominal pain/dyspepsia, was being developed mainly in the third month after the start of NSAIDs intake.

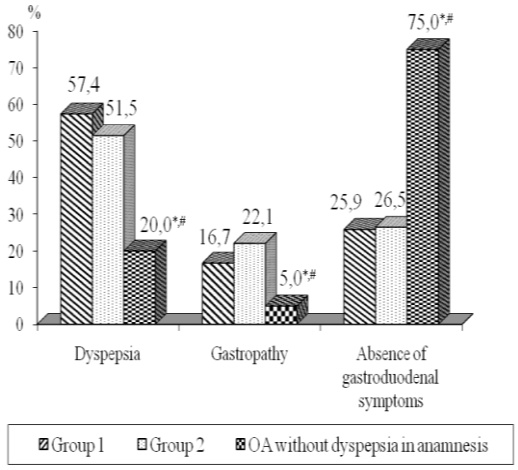

Fig. 1. *Rate of NSAIDs gastropathy/dyspepsia in the patients examined. Note: * — significant difference as compared with group 1 (P<0.05); *, # — significant difference as compared with group 2 (P<0.01).*

Patients of group 1 had abdominal pain not related to food intake as the leading clinical syndrome upon the development of NSAIDs gastropathy. Subjectively, patients were more likely to notice moderate — in 6 (66.7%) of 9 cases — and expressed — in 2 (22.2%) of 9 cases — intensity of pain. Unlike group 1, clinical picture of NSAIDs gastropathy was obliterated and low-symptomatic in group 2. Periodical feeling of heaviness and discomfort in the epigastrium, often after a meal, were the main clinical manifestations, which occurred in 12 (79.9%) of 15 patients. At the same time, abdominal pain was observed in 3 (20.1%) of 15 patients. Upon NSAIDs dyspepsia, discomfort and feeling of heaviness in the epigastrium prevailed in all the groups (Table 1). Noteworthy was the fact that symptoms of gastroesophageal reflux disease in group 1 were 2.7 times more common than in group 2. This circumstance pointed out the activation of acid processes upon NAG in patients receiving NSAIDs.

TABLE 1
CHARACTERISTIC OF NSAIDS DYSPEPSIA SYNDROME IN THE PATIENTS EXAMINED

SYMPTOM	OA WITH NAG (N=31)	OA WITH AG (N=35)	OA WITHOUT DYSPEPSIA IN ANAMNESIS (N=8)
«HUNGRY» EPIGASTRIC PAIN	10 (32.26%)	—	—
EPIGASTRIC PAIN AFTER EATING	3 (9.68%)	5(14.29%)	—
PERIODICAL FEELING OF DISCOMFORT IN THE EPIGASTRIUM	12 (38.71%)	25 (71.43%)	8 (100%)
PERIODICAL FEELING OF HEAVINESS IN THE EPIGASTRIUM	10 (32.26%)	25 (71.43%)	4 (50%)
PERIODICAL NAUSEA	8 (25.81%)	10 (28.57%)	1 (12.5%)
PERIODICAL HEARTBURN	12 (38.7%)	5 (14.29%)	1 (12.5%)

4 DISCUSSION

Results of study indicate that the factor of CG in anamnesis significantly increases the risk of gastropathy/dyspepsia upon receiving NSAIDs as compared to the patients without gastroduodenal pathology in medical history. NSAIDs intake and the presence of atrophic changes in the gastric mucous membrane in patients can be characterized by the increased rate of adverse side effects from the gastroduodenal zone as compared with NAG. Clinical picture of NSAIDs gastropathy upon AG and NAG has its own peculiarities. So, upon NAG, development of gastropathy is characterized by abdominal pain of varying intensity not related to food intake, while upon AG — by prevalence of symptoms of heaviness and discomfort over the weak pain syndrome. These circumstances concern such selective NSAIDs as meloxicam (average dose (12.5±1.39) mg/day) or nimesulide (average dose (150±14.91) mg/day).

5 CONCLUSION

1. Intake of meloxicam or nimesulide concerning OA in 2.9 times (P<0.03) increases risk of development of NSAIDs gastropathy/dyspepsia in patients with CG in anamnesis as compared to patients without concomitant gastroduodenal pathology.
2. AG is associated with a trend (P>0.05) of the higher risk of erosive gastropathy.
3. It is reasonable to conduct gastroprotective

therapy upon NSAIDs intake to prevent gastropathy in patients with CG in the anamnesis.

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