

THE EFFECT OF INDOMETHACIN ON GLUCOSE SERUM

OMAR RASHID SADEQ¹ & MAHER M.A JARBAWI²

¹Assistant Professor, Faculty of Dentistry, Arab American University, (AAUJ) Palestine, Jenin, Zababdeh

²Dean, Associate Professor, Faculty of Dentistry, Arab American University,
(AAUJ) Palestine, Jenin, Zababdeh

ABSTRACT

Indomethacin is used to treat moderate to severe osteoarthritis, rheumatoid arthritis, acute gouty arthritis, ankylosing spondylitis, bursitis, tendinitis, diabetes insipidus and for closing of patent ductus arteriosus (PDA).

Indomethacin is unique among NSAIDs in that it is the drug of choice for management of gouty arthritis, indomethacin is a very ulcerogenic medication that can cause fatal ulcer bleeding, it causes more fluid retention compared to ibuprofen, frequent frontal headache, pancreatitis, heart attack and stroke are specific unwanted effects of indomethacin, it shouldn't be used as other NSAIDs if one have had recently or will be having bypass heart surgery, as well as pregnant women more than 29 weeks of gestation.

Indomethacin is not recommended for pediatric patients 14 years of age and under, because there have been cases of hepatotoxicity reported in pediatric patients with juvenile rheumatoid arthritis, including fatalities.

Indomethacin is provided in much trade formulation namely indocin and indolin, it is available in multiple dose variations, depending on pathologic conditions, to reduce the possibility of peptic ulcers, indomethacin should be prescribed at the lowest dosage needed to achieve a therapeutic effect, usually between 50–200 mg/day. It should always be taken with food, for osteoarthritis and rheumatoid arthritis typically as indomethacin 25, 50 mg orally b.i.d. or t.i.d., its dosage for gouty arthritis is 50 mg orally or rectally 3 times a day, the dose may be increased (2-4 days).

The aim of recent study is to evaluate the effect of indomethacin on carbohydrate metabolism, as most of NSAIDs are all thought to increase risk of hypoglycemia, about 35 patients with gouty arthritis, (GA), osteoarthritis (OA) and rheumatoid arthritis (RA) were investigated for about 2 weeks, patients were treated by indomethacin, WBCs count, C-reactive protein (CRP), rheumatoid factor (RF), erythrocyte sedimentation rate (ESR) and blood glucose levels are examined before during and after treatment.

The main finding of this research study is that indomethacin produces a strong anti-inflammatory effect which may be similar to diclofenac and methotrexate in treating early stages of OA and GA respectively; in addition indomethacin causes evident reversible hypoglycemia in elderly patients older than 50 years of age, in all 3 investigated groups.

KEYWORDS: Indomethacin, NSAIDs, Ibuprofen, Pancreatitis, Peptic Ulcer, Gestation, Gouty Arthritis, Osteoarthritis, Rheumatoid Arthritis, Hypoglycemia, Ibuprofen, Methotrexate