

Abstract

Introduction

An interaction has been reported between *Nigella Sativa* (NS) and ranitidine (RAN) on gastric ulceration induced by ethanol in rabbits; the combination NS and RAN caused disappearance of anti-ulcer effect of NS or RAN

Aim

The current study was designed to investigate the effect of NS, OMP and their combination on gastric ulcer induced by alcohol in a rabbit model with a

special emphasis on whether the combination adversely affect the response produced by either treatment individually

Materials and Methods

mature rabbits were divided into 4 groups. The animals were fasted 24 for 72 hours then treated as follow: group 1, 2, 3 and 4 were treated respectively with normal saline (oral), NS oil (10ml/kg) orally, OMP (20mg/kg) IP, and NS+ OMP

One hour later, animals were given absolute ethanol orally; and sacrificed 3 hours later for estimation of Ulcer index (UI), gastric pH, malondialdehyde (MDA), glutathione (GSH), histamine (HIS) levels in serum and gastric tissue

Results

The results of the present study showed that NS or OMP reduced area of ethanol induced gastric ulceration (UI) from 10 ± 0.11 mm in the control \pm to 5.13

mm in the group treated with NS,)P value = 0.07). A greater 0.68 reduction in UI was observed with OMP (10 ± 0.11 mm in the control vs 0.27 ± 0.44 mm in OMP group, P value = 0.002). UI was found increased in the group of rabbits treated

VII

with the combination NS + OMP. UI achieved levels which was higher than that

of OMP (1.68 ± 0.26 mm in OMP + NS treated group vs 0.27 ± 0.44 mm in the group treated with OMP only, P value = 0.018). OMP and to a lesser extent NS

significantly elevate gastric pH which was ($p= 0.001$, $p=0.004$) for OMP and NS respectively compared to the control value. The level of pH decreased again towards the control value in the combination .treatment

Malondialdehyde (MDA) in gastric tissue was 91.56 ± 60.3 ng/ml in group

of rabbits treated with ethanol (control) which was reduced to 53.81 ± 19 ng/ml in the group treated with NS and to 74.47 ± 24.9 ng/ml in OMP treated group. The

MDA level increased in the group of rabbits treated with the combination NS + OMP to levels which were higher than either NS or OMP groups but statistical significance was achieved only between the combination group and NS treated group (83.66 ± 20.8 ng/ml in the combination group vs 53.81 ± 19 ng/ml in the group treated with NS group, P value = 0.027). The effect of NS or OMP or their combination on .Glutathione (GSH) reacted in a similar way of MDA

Histamine level in gastric tissue was 10.56 ± 1.92 ng/ml in the group treated with ethanol which was significantly reduced to 6.3 ± 1.43 ng/ml in NS group (P value = 0.001) and to 7.14 ± 0.78 ng/ml in OMP group (P value = 0.002). The level of gastric tissue histamine raised again in the group treated with combination NS+OMP to 8.59 ± 1.88 ng/ml which was significantly higher than NS group (P value = 0.04) and also higher than OMP treated group although it did not achieve

.statistical significance

Conclusion

Combination of NS with OMP partially reduced the gastro-protective
.effect produced by NS or OMP when given individually

VIII