In vitro activity of wine compounds (resveratrol, methyl gallate and other phenolic compounds) against *Helicobacter pylori* clinical isolates

Objective:

The aim of this study was to determine the in vitro activity of different phenolic compounds against *H. pylori* clinical isolates by a disc diffusion method.

Methods:

• 28 *H. pylori* clinical isolates were obtained from gastric biopsies from patients suffering of gastric symptomatology.

 Biopsies were processed following standard methodology for these bacteria.

• The *in vitro* activity of different phenolic compounds was studied by a disc diffusion method: Epicatechin, gallic acid, resveratrol, coumaric acid, ferulic acid, methyl gallate, catechin, quercetin, vanillic acid and kaempferol. • Compounds were diluted in ethanol:water (10:90 v/v) at 25mM concentration. Ethanol was used in the same conditions than phenolic compounds to rule out its activity.

• Blank disc were impregnated with 10mcl of each compound and were put in agar Columbia plus 7% sheep blood inoculated with a suspension of a 2 McFarland H. pylori.

 Plates were incubated for 3 to 5 days at 37°C in a 10% CO2 atmosphere. Inhibition zone around disc were measured.

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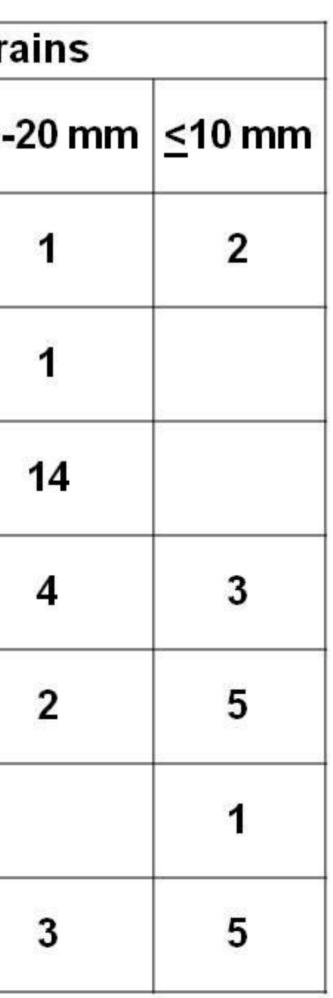
Results:

-The number of strains inhibited for the different compounds tested are shown in the table.

- Figure 1 showed the inhibition zone detected with compounds.

- Gallic acid, coumaric acid and furelic acid did not inhibit the strains tested. Ethanol produced not inhibition in the strains tested.

	Num. Strains / total (%)	Number of sra		
		>30 mm	21-30 mm	11-3
Epicatechin	4/28 (14.3%)		1	
Resveratrol	28/28 (100%)	6	21	
Methyl gallate	28/28 (100%)	4	10	
Catechin	7/28 (25%)			
Quercetin	7/28 (25%)			
Vanillic acid	1/28 (3.6%)			
Kaempferol	10/24 (41.2%)		2	





Conclusions:

Two of the phenolic compounds tested in this study (Resveratrol and methyl gallate) showed in vitro activity against all Helicobacter pylori clinical isolates tested by a disc diffusion method.

