Campylobacter jejuni

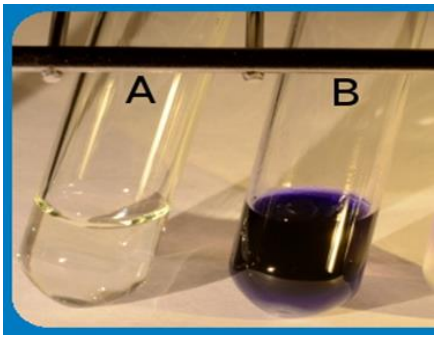
Morphology

1) Small Gram negative rods with comma or S or gull wing shapes.
2) Motile with asingle flagellum at one or both poler .
3) Motility is darting motion or cork screw-Like movement.

Cultural characters

1) Grows on skirrow's medium , this medium used for Campylobacter isolation from the stool as it contains vancomycin, polymyxin and trimethoprim .
2) Microaerophilic and Capnophilic (grow's best in presence of 5% O_2 and 10% CO_2).
3) Grows best at 42° (degree).
4) Growth may take 2-5 days .

Biochemical reactions



1. Oxidase positive
2. Catalase positive
3. Hippurate hydrolysis positive
4. Urease negative
5. Non proteolytic
6. Unable to attack carbohydrates .
7. Sensitive to nalidixic acid, cephalothin and erythromycin.
8. Filtaration of emulsified stool may be done using 0.45µm pore size fillers that allow the small campylobacter to pass and exclude other organisms present in the stool.

This method is required for isolation of campylobacter other thanC.jejuni that are sensitive to the antibiotics in skirrow's medium.

Helicobacter pylori

Morphology

It is similar to campylobacter in morphology but differs in **Having multiple sheathed poler flagella .**

Cultural characters

- Similar to Campylobacter but **grow's at 37 degree** .

Biochemical reactions

- Similar to campylobacter but **helicobacter is ureas positive.**

Laboratory diagnosis

1) Invasive methods : Gastric biopsy specimens
   a. Smears stained with Gram and special stains will show the spiral or curved organism .
   b. Culture as in campylobacter but incubater at 37 degree for 7 days in a humielatmospher
   c. Urease test
2) Non_invasive methods
   a. Urea breath test
   b. ELISA
   c. PCR
   d. Seroiogical diagnosis