Al-Azhar Med. J. *Vol. 48(1), January, 2019, 1-2*
DOI : 10.21608/amj.2019.52201
https://amj.journals.ekb.eg/article_52201.html

EDITORIAL

FECAL TRANSPLANTATION
The treasure in your colon

By

Raouf Sallam

Clostridium difficile colitis is a very serious condition, with intractable diarrhea when mild but when severe may lead to pseudomembranous colitis and perforation of the colon with significant fatality.

We can fairly say that clostridium difficile colitis is an iatrogenic disease. It happens when this pathogenic organism takes over the rest of the flora of the colon, flourishes and acts uninhibited. We must remember that the very frequent use of antibiotics systemically, whether needed or not, will have its effect on what we call the normal bacterial flora of different parts of the body. Antibiotics- perhaps like chemotherapy drugs- act like an automatic machine gun, it kills what happens to be in its way good or bad. The result is disbiosis, that is disturbance in the balance of the ecosystem of the flora. In the colon the disturbance is to the advantage of the pathogens. Good bacteria are defeated and bad bacteria win with the clostridium difficile flourishing and acting, leading to this serious infection.

If the disturbance of the colonic flora is the cause, then restoring the normal flora would be the treatment. A normal adult's feces contain the ideal bacterial mix of normal colonic flora, and hence the very logical idea of fecal transplantation. Fecal matter from a suitable donor is placed into the colon of the diseased person. It should do the job, and it does.

Fresh fecal matter is obtained from a suitable donor, liquefied in saline and then filtered. The filtrate is transplanted to the colon of the recipient by a colonoscope or a nasogastroduodenal tube, or a retention enema. Protocols of preparation and administration differ slightly in detail but are the same in principles, goal and outcome.

The above scenario is already in use in some countries. What is still under trial is packing the transplantable fecal matter- after freeze drying- into capsules to be taken by mouth, thus avoid the trouble and cost of other methods of administration. Capsules can also be stored to be ready for use in urgent cases where fresh stools may not be available.

The importance of a normal bacterial flora to the health of the individual has prompted research in this direction and preliminary reports of the value of fecal transplantation in other conditions are being published every month. These conditions are: inflammatory bowel disease, functional g.i.t. conditions, metabolic syndrome, obesity and -surprisingly- parkinsonism and autism. All these are reports of clinical trials on patients. What is still in the animal trial phase is the value of fecal transplantation in neuropsychiatric disease.This should not be surprising if we remember the microbiota-gut-brain axis. Also being studied is the value in chronic fatigue, autoimmune disease and multiple sclerosis.

If fecal transplant proves useful in all or most of the above conditions then the colon must be the wealthiest organ in the body and every one of us has a treasure inside his tummy and-one should be reluctant to flush down the toilet after defecating. In fact, centres in USA practicing fecal transplantation pay 40 dollars for the donor for every donation. The donors are screened for suitability in a way akin to the blood donors. University students are the main donors. There are quite a few stool banks in USA.

If it is the good bacteria in the fecal transplant that is effecting the cure, then we can use a similar bacterial mix grown in the laboratory instead of using the fecal matter itself.

We should also revise our antibiotics, not only in usage but also in type. The antibiotics we are using now not only kill the good bacteria while killing the bad bacteria, but also create
super bugs when the bacteria modify to adapt to the antibiotics and develop resistance. The ideal antibiotic is the one that targets only the bad bacteria and eliminate them so that no super bugs are created and the good bacteria is left behind. Let us hope.

Until then the use of the fecal transplant tablets may be considered prophylactically when using antibiotics of a type or duration that we believe may lead to dysbiosis of the colonic flora.

Al-Azhar Med. J. *Vol. 48(1), January, 2019, 1-2*
DOI : 10.21608/amj.2019.52201
https://amj.journals.ekb.eg/article_52201.html

Having mentioned the values of fecal transplantation, established and expected, we must mention that the long term risks are yet unknown.

I am not aware of any center in Egypt that offers fecal transplantation or researching on it. I do not know the reason, but one factor may be a cultural resentment for using feces
for any reason let alone using it for consumption for treatment.

Considering all of the above we can easily answer the question why did almighty God create bacteria? The answer is , good bacteria is useful and bad bacteria is only bad because of our doing, we drove them or at least allowed them to be bad. Moreover good bacteria and bad bacteria together form a bacterial ecosystem that helps regulate the function of the colon and may be other systems.

It is mentioned in the journal of gastroenterology that “in the Second World War, warm camel stool has been used by German soldiers for bacterial dysentery treatment “.
In Egypt, few years ago, many journalists and writers ridiculed a scholar for saying that the Islamic literature mentioned that camels urine can be used as a treatment. The proper scientific response for such a claim is to ask the claimant to show us his evidence, if he cannot then we cannot consider the claim to be correct . BUT , and here is a big but, we cannot either consider the claim to be wrong. If nothing is correct until proven correct, nothing is wrong until proven wrong. What is not correct and not wrong, like most of what we think we, resides in fact in the big ocean of” we do not know “ which surrounds the small island of “ we know”.

Let us remember that almighty God doesn’t create any thing for fun. All his creations are either to benefit us, challenge us, test us, or humble us.

Prof. Raouf Sallam F.R.C.S.

Editor-in-Chief