March 14, 2018
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MedEdu Tabuk

Weekly Newsletter

Department of Medical Education, Faculty of Medicine, University of Tabuk

MEET THE STUDENTS SESSION

Message From the Editor- Dr. Tanveer

"Meet The Student Session" is a session organized by the Medical Education with the support of the Dean, Vice Deanship of Academic Affairs and Vice Deanship of Female Faculty. The sessions are organized once per semester and separate for male and female students. In this session all the students from the second year to the final year get a chance to meet the Dean, concerned Vice Deans and Medical Education Unit to discuss their issues. This is the second time it has been held.

Today's article by **Dr. Khalid Alhazmi** may be cited like this:

Alhazmi, K. (2018, March 14) Cutaneous Leishmaniasis in Saudi Arabia. *MedEdu Tabuk*, 2(15). 6-10.

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MEET THE STUDENT SECTION

Message from Dr. Tariq Ali Al Balawi Hospital Director, King Fahad Specialist Hospital, Tabuk

Foreward by the Hospital Director, KFSH, Tabuk.

Assalamualaikum Wa Rahmatullahi,

I am delighted to know that Tabuk University and King Fahad Specialist Hospital, Tabuk started joint educational exchange initiative reflecting as the Weekly Newsletter. Such endeavour creates a common platform for learning for multidisciplinary teams working in universities and hospitals. I highly appreciate the effort and look forward to the success of the collaborative effort.

Dr. Tariq Ali Al Balawi

Saudi Board of Internal Medicine,
Consultant Internal Medicine,
Hospital Director,
King Fahad Specialist Hospital, Tabuk.

CASE REPORT: HYPERTRIGLYCERIDEMIA INDUCED ACUTE PANCREATITIS

DR Emad Hussieny, DR Osama Salih MD

King Fahad Specialist Hospital Tabuk, Tabuk

This is 45 year old Saudi male, known case of hypertension and obese type 2 diabetes mellitus on OAH, presented to emergency department with upper abdominal pain, lipemic serum and elevated serum amylase, TG was 33 mmol/L, RBS was 21 mmol/l, other metabolic panel was unremarkable, imaging showed enlarged fatty liver.

The patient was put on NPO, IVF ringer lactate, intensive insulin therapy, omeprazole, fenofibrate, omega 3 FA, amlodipine, perindopril, started fat free diet in the second day, serial TG monitoring showed marked reduction over five days to 5.4 mmol/L and the patient was stable and discharged on basal insulin, metformine, linagliptin, ASA 81 mg, vitamin B complex plus the previous oral medications and life style modification. In conclusion, Insulin therapy in severe hypertriglyceridemia gave dramatic response for rapid lowering of triglycerides and control of acute pancreatitis.

Exam Invigilation Schedule 18/3/2018 - 22/3/2018

Dr. Zubair Mohammad & Dr. Ahmed Mesaik

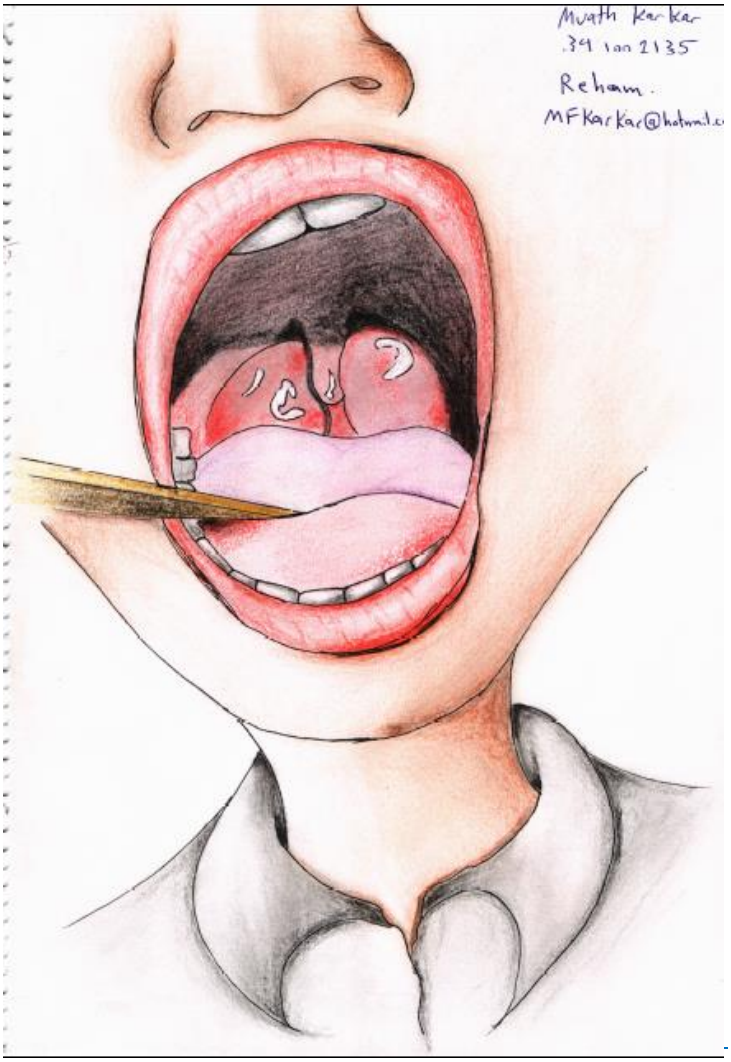
Exam Invigilation Schedule

Date	Module	Main Invigilators	Reserve Invigilators	Time	Venue
18/03/2018	Clinical Skill Module Written	Dr. Fakruddin Alfaki Dr. Abdullatif Elbadawi	Dr. Yaseen Ibraheem	10:00-12:00	Central Exam Hall
21/03/2018	Clinical Skill Module OSCE	**(For Male Students)** Dr. Tariq Hamdan Dr. Hisham Al-Shadfan Dr. Khalid Funjan Mr. Adil Mohammad Alatawi	Dr. Atif Shabana	Starting from 8:00 AM You are requested to contact the Module Coordinator for the OSCE exam time for Male and Female students	OSCE Center
		(For Female Students) Dr. Ashraful Islam Dr. Nahed Alawneh Dr. Mustafa Nossair Mr. Mehdi Salim Albalawi	Dr. Ayman Faisal		

STUDENT SECTION

Muath Karkar, 5th year

E-mail: MFkarkar@hotmail.com



Academic Affairs arrangement for Next Week

Prof Magdy M. ElShamy

For Female Section:

- **Medicine &Subspecialties: 6th Year,** Announcing the **Results** of **Final-Module Exam.**
- **Pediatrics: 5th Year,** Announcing the **Results** of **Final-Module Exam.**
- **Clinical Skills Module: 4th Year, Mid-Module MCQs Exam** and **OSPE** on Sunday, 18/3/2018
- **Clinical Skills Module: 4th Year, Mid-Module OSCE** on Wednesday, 21/3/2018

For Male Section:

- **Surgery &Subspecialties: 6th Year,** Announcing the **Results** of **Final-Module Exam.**
- **Obstetrics &Gynecology: 5th Year,** Announcing the **Results** of **Final-Module Exam.**
- **Clinical Skills Module: 4th Year, Mid-Module MCQs Exam** and **OSPE** on Sunday, 18/3/2018
- **Clinical Skills Module: 4th Year, Mid-Module OSCE** on Wednesday, 21/3/2018
- **Reproduction System Module: 3rd Year,** Announcing the **Results** of **Final-Module Exam.**

CUTANEOUS LEISHMANIASIS IN SAUDI ARABIA

Dr. Khalid Alhazmi

Dr. Khalid Alhazmi is Acting Assistant Professor, Department of Pathology at Faculty of Medicine, University of Tabuk. He can be contacted by email: kalhazmi@ut.edu.sa

INTRODUCTION :

Cutaneous Leishmaniasis (CL) is a cutaneous disease with varying clinical presentation, caused by single-celled parasite that is transmitted by the bite of an infected sand fly. CL is the most common form of leishmaniasis. It can cause skin nodules or sores which are usually self-healing, but it causes skin ulcers and disfiguring scars, those on the face can result in serious social and psychological effect.

Often, CL lesions appear over exposed parts of the body. The most commonly affected sites are the lower limbs 56.75% follow by the upper limbs 27.02% and face 10.81%. Nevertheless, it can occur rarely on the other sites of the body like the back or the groin area.

This infected disease exists in many temperate and tropical countries of the world. Approximately, 0.7 to 1.2 million new cases of CL occur each year worldwide, with about one third of cases occurring in each of the following three regions: the Americas, the Mediterranean basin, and the western Asia from Middle East to central Asia. It is a neglected disease affecting mostly people of poor communities in developing countries.

In Saudi Arabia, according to the Saudi Ministry of Heath seven-year reports (2006–2012), the five most infected regions among the 20 Saudi provinces are El Qassim, AlMadinah Al-Munawarah, El Hassa, Riyadh and Northwestern area of Saudi Arabia[1].

The second form of Leishmaniasis is Visceral Leishmaniasis (VL). It is less commonly than CL but more serious and fatal if not diagnosed and treated correctly. It occurs when the Parasites infect the tissues of internal organs, especially Liver, Spleen, and Bone marrow.

The third form is called Mucocutaneous Leishmaniasis (ML). It is uncommon; but it can happen on the patients who have had cutaneous leishmaniasis when the Parasites infect the mucous membranes of the mouth, nose or larynx.

RISK FACTORS AND MODE OF TRANSMISSION:

CL is a vector-borne disease transmitted by the bite of an infected sand fly. Globally more than 90 sand fly species are suspected vectors of Leishmaniasis from over 800 species of sand fly are recorded [2]. However, only five species of Phlebotomus (The female P. sergenti, P. papatasi, P. bergeroti, P. arabicus and P. alexandriare) have been considered to be incriminated as vectors of CL in KSA. The main reservoir hosts and vector are Ph. papatasi [3–5].

In most endemic areas in Saudi Arabia, the causative organism was identified as L. major. Cutaneous leishmaniasis due to L. tropica is less prevalent compared to zoonotic CL caused by L. major. It occurs within small endemic foci in the west (Al Madina Al-Munawarah and Al Qassim) and southwest (high plateau of Aseer) provinces [5,6].

The life cycle is not complicated. It starts when the infected sand fly bites a normal human and injects small numbers of parasites inside his body through the skin. Then, the mononuclear blood cells react and start to phagocyte these parasites. This stage is called the promastigote stage. Once the parasite become inside the human mononuclear cells, the parasite enters the amastigote stage and begins to multiply and infect other cells and tissues (Figure 1). The sand flies get infected when they bite and feed on infected people or infected animals.

Leishmania can be transmitted as well from a pregnant mother to her fetus through the blood.

The major risk factor for leishmaniasis is being exposed to infected sand flies. In KSA, males were affected more than females with the percentages of 78% and 22%, respectively [7]. This could be explained by the Islamic ethics where the ladies cover their whole body by wearing Hijab. However, males are more exposed to sand flies because of their behavior and occupations. The majority of the affected expatriates were construction workers and laborers working in farms and fields [7]. The sand flies are more common in rural area. There is no evidence to prove the validity of some false beliefs that saying: sleeping on the high bed protects against the sand fly bite. Spending nights at the periphery of towns, where the flies are abundant, will increase the incidence of CL. Factors that weaken the immune system (for example as malnutrition and infection with the human immunodeIciency virus (HIV)), usually increase the incidence and severity of this disease.

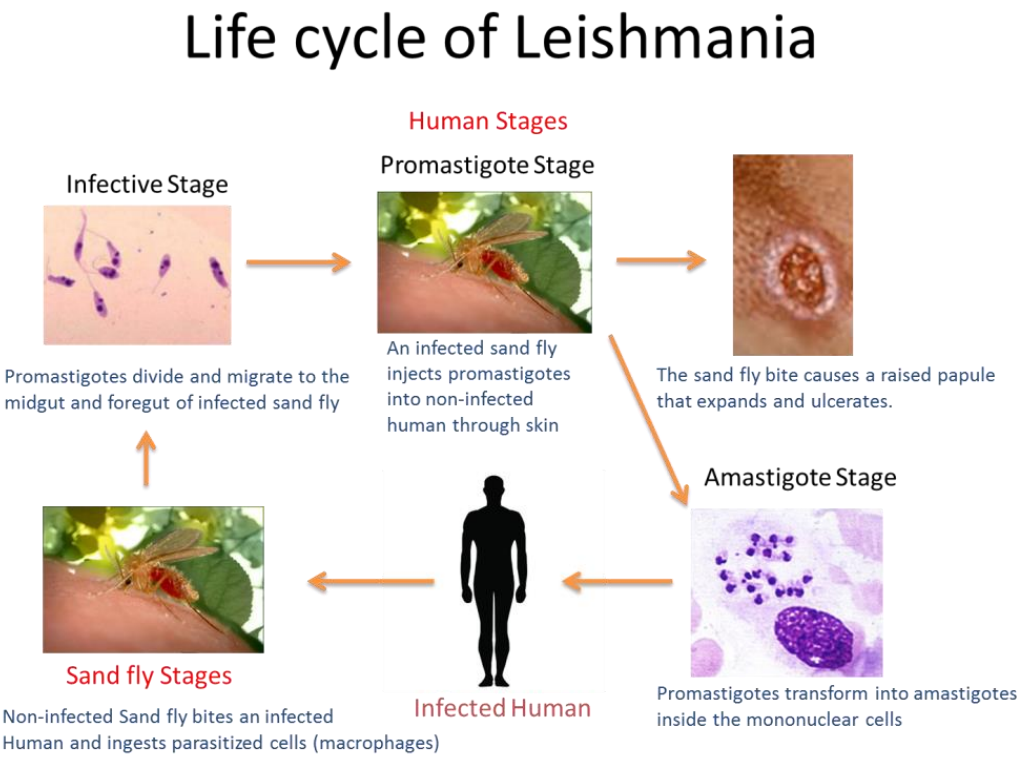


Figure 1 : Life cycle of Leishmania parasites showing the sand fly and human stages.

CLINICAL FEATURE

In cases of cutaneous leishmaniasis (CL), it takes several weeks to months for the lesion(s) to appear; the incubation periods for L. major and L. tropica are 2–8 months, respectively [2]. The site of the sand fly bite usually forms a raised papule that expands and ulcerates, with crust formation occurring at the center of the lesion(s). The face, neck, arms, and legs are the commonly affected sites and the lesions' size varies; smaller lesions (1– 2mm) are more frequent [4]. These lesions are painless, unless secondarily infected, and the patient may present with a single or multiple lesions. They take on a variety of appearances and may resemble acne, warts, or psoriasis. They may look like large scaly, ulcerated plaques, or form shallow ulcerated nodules. Enlargement of regional lymph nodes has been reported to occur in 10% of cases, and the dissemination through lymphatics may produce subcutaneous nodules connected with palpable thickened lymphatics; this is called sporotrichoid CL. In severe cases, known as diffuse cutaneous leishmaniasis, nodular lesions may occur widely and last for years or even for life.

Usually the lesions take over months to years to heal, leaving scars that often resemble old burns.

DIAGNOSIS:

In countries where the disease is common, patients with typical symptoms and sings can be diagnosed to have leishmaniasis clinicaly. However, a definite diagnosis of CL is a combination of clinical history, epidemiological data, and laboratory confirmation.

Skin biopsy and examining tissue under a microscope to detect the parasite is still the mainstay for diagnosis of CL and more accurate (Figures 2 and 3). Culture and molecular diagnosis allows identification of species. Recently, the mini- and microculture techniques are less in cost, and more sensitive in diagnosis but less effective in Leishmania typing [8, 9]. The PCR techniques have 100% specificity and 92.5% sensitivity in diagnosis of CL in the old world [10].

Antibodies in the blood can be detected using enzyme-linked immunosorbent assays (ELISA) but with less value because they are variably positive in CL.

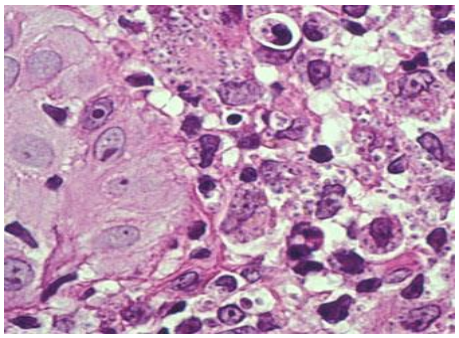


Figure 1 : A histopathologic slide shows amastigotes inside macrophage cells, on hematoxylin-eosin stain.

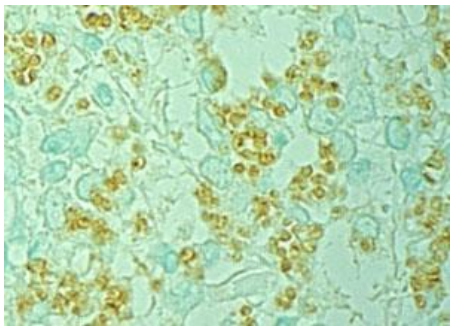


Figure 2 : A histopathologic slide shows a positives Immunostaining for intracellular amastigotes.

TREATMENT

CL is generally a self-limited disease, with spontaneous healing occurring over months to years (L. major within 4–8 months, L. tropica within 1 year or longer). Therapeutic interventions are most often used to accelerate the healing process, to narrow the period of transmission and to prevent the secondary bacterial infection.

Therapeutics for CL consist of local/topical (paromomycin ointment, imidazole ointment, local infiltration of lesion with antimonials), systemic (antimonials, azoles, miltefosine, amphotericin B and its formulations), and physical (e.g.,

thermotherapy, cryotherapy) interventions. Disfiguring scars can be treated by plastic surgery. The efficacy profile of these therapies varies depending on the type of therapy, the causing Leishmania species, and the geographical regions [11, 12].The WHO recommended regimen of systemic antimonials for CL is 20mg/kg for 3 weeks [7].

In KSA, topical clotrimazole shows complete healing of the lesion in some patients (16%) [13]. Intralesional pentavalent antimonial therapies have high cure rates, but it is painful, sometimes requires local anesthesia. Intralesional antimonials have cure rates of 88% and 97% [14, 15]. The antifungal oral drugs, including fluconazole, itraconazole, and terbinafine, have been evaluated experimentally in KSA with a good result (16).