



Prevalence of Schistosomiasis among Patients attending hospitals in Babylon province

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Abstract:

Urine samples of 592 patients , attending hospitals were collected to detected prevalence of *Schistosoma haematobium* parasite in Babylon province . it's found that only 2 patients were infected (0.4%). The infected cases recorded in September / 2016 and June / 2017 (Case in each month) . The 2 positive cases were males out of 228 male patients (0.9%), while no infection found among females . one of the infected cases recorded among 84 individuals in the category 6-14 years (1.2%) , second case was among 44 individuals in the category 15-30 years (2.3%) . Symptoms of Schistosomiasis among some patients was studied

Key words : prevalence . schistosomiasis . patient . Babylon .

بين المراجعين الى المستشفيات في (Schistosomiasis) مدى انتشار طفيلي داء المنشقات البولية محافظة بابل

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الخلاصة :

تم جمع 592 عينة ادرار من المرضى المراجعين الى المستشفيات في محافظة بابل للكشف عن مدى اصابتهم بطفيلي البلهارزيا البولية (*Schistosoma haematobium*) وجد ان عدد المصابين بالطفيلي 2 فقط ونسبة اصابة بلغت 0.4% سجلت الاصابات في شهري ايلول/2016 وحزيران/2017 (بواقع اصابة واحدة في كل شهر) . كانت عدد الاصابات بين الذكور 2 من 228 ونسبة اصابة بلغت 0.9% ولم تسجل اي حالة اصابة بين الاناث . ظهرت اصابة واحدة بين 84 شخصا من الفئة العمرية 6-14 سنة ونسبة اصابة بلغت 1.2% , اما الاصابة الثانية كانت بين 44 شخصا من الفئة العمرية 15-30 سنة ونسبة اصابة بلغت 2.3% درست العلامات المرضية لداء المنشقات التي ظهرت على عدد من المرضى .

Introduction :

Schistosomiasis is a helminth parasitic disease of human , world wide spread in more than 76 tropical countries [1,2,3] . Urinary Schistosomiasis infection in Iraq cause areal hazard on public health 1930s decade when [4] recorded a high rate of infection with the parasite in thiagar , Basrah

and Maisan , which was 80% , 80% and 84% respectively .

In 1990s decade, rate of infection was much decreased comparison to previous studies [5,6]. the rate of infection increased again after 2003 . when [7] found that 20.4% of patents attending hospitals in Baghdad were infected . purpose of present study to

investigate incidence of urinary schistosomiasis in Babylon province .

Materials and Method :-

Urine samples of patients attending different hospitals in Babylon province , was collected in containers and directly transported to Laboratory under cooling also some symptoms that noticed on patients was recorded . urine samples examined due to following steps .

- 1 . 10 ml of urine was intaked by syringe contain plastic needle.
2. The syringe connected to funnel contain filter , and the urine sample inoculated in filtered funnel .
3. Filter removed from syringe and put on slide that covered with drop of saline to prevent dehydration .
4. Slide examined microscopelly (x10) to looking for eggs of *Schistosoma haematobium* [8] .

Statistical analysis : Data analyzed by using chi – square (χ^2)[9]

Result and Discussion :-

The results exhibited very low prevalence of *Schistosoma haematobium* in Babylon province . out of the total number of 592 patient , 2 only were infected (0.4%) . Result in agreement with [10,11] in Babylon and Karbala provinces who don't recorded infection with the parasite in their studies . Two infected cases recorded in September / 2016 and June / 2017 (Tabel 1) , while no infection found in other months of the study , which may be attributed to suitable environmental factors for present of

intermediate host (snails) that shedding cercaria in river water and exposure of human to these infective stages through swimming , fishing or washing animals in river water . [7] in Baghdad province refered that high infection with urinary Schistosomiasis were in end of Spring and Autumn .

According to sexes , the 2 infected patents were males from the total number examined 228 (0.9%) , No infection found in females (Tabel 2) . All the previous studies found males more infected than females [4,7,12] , because males more exposure to river water than female through swimming , fishing and other activities .

One infected case out of 84 examined patient (1.2%) in the category 6-14 years was recorded , second case was among 44 examined patients (2.3%) category 15-30 years . our present results found in agreement with [13] who observed high rate of infection in the category 5-19 years , that may be related to not have awareness enough for the personal hygiene of this category .

Haemeturia is the main clinical sign of Schistosomiasis , but not all patient with haemeturia are consider infected , our study observed out of the total 592 examined patient , 78 were show haemeturia and 2 cases only found accompanied with aggs of the parasite , the study that done in Egypt by [14] observed that out of 84 patient with haemeturia , only 16 found infected with *Schistosoma haematolaiuos*

. Table 1 – Prevalence of *Schistosoma haematobium* according to months of the year

Month / Year	No. Examined	No. Infected	%
September /2016	60	1	1.7*
October	60	-	-
November	60	-	-

December	52	-	-
January / 2017	60	-	-
February	60	-	-
March	60	-	-
April	60	-	-
May	60	-	-
June	60	1	1.7*
Total	592	2	0.4

* p > 0.05

Table 2 – Prevalence of *Schistosoma haematobium* according to Sex .

Sex	No. examined	No. infected	%
Males	228	2	0.9**
Females	364	-	-
Total	592	2	0.4

**p > 0.001

Table 3 – Prevalence of *Schistosoma haematobium* according to age .

Age / Years	No. examined	No. infected	%
6 – 14	84	1	1.2*
15 – 30	44	1	2.3**
>31	464	-	-
Total	592	2	0.4

* p > 0.05

**p > 0.001

References :

- 1- Despommier , D.D ; Gwads , R.W ; Hotez , P.J. and Kuirsch , C. (2004) Schistosomiasis . Chapter 34 In: Parasitic Disease . 5thEd. Medical Ecology . New York , Apple Trees Production , 213 pp.
- 2- WHO. (2010) High prevalence of urinary Schistosomiasis in two Communities in south Darfor , Sudan .
- 3- Nwabueze , A.A. and Opra , K.N. (2007) Outbreak of urinary Schistosomiasis among school children in Riverine communities of Datta state , Nigeria , J. Med. Sci. , 7(4) : 572-578 .
- 4- Mills , E.A ; Machattie , C. and Chadwick , C.R. (1936) *Schistosoma haematobium* and its life cycle in Iraq . Trans. R. Soc. Trop. Med. Hyg. , 30:317-343 .
- 5- Al-Saad , H.M (1997) Epidemiological , Parasitological and Immunological study of *Schistosoma haematobium* infection in Maisan , Southern Iraq . Ph. D. Thesis , Basrah University .
- 6- Al-Biaty, H.S. (2000) Epidemiological study of *Schistosoma haematobium* in Baladrooze sabprovince . M. Sc. Thesis , Vet. College . University of Baghdad .
- 7- Ali , J.K. , Hamadi , K.A and Eliewy , H.H (2012) Study prevalence of urinary Schistosomiasis among human in Baghdad province . j . Karbala University , 10(3):163-166 .
- 8- Peters , P.A. ; Warren , K.S and Mohammed , A.A.F. (1967) Rapid accurate quantification of *Schistosoma* eggs via nucleo pore filters . J. Parasitol . , 62 : 154-155
- 9- المحمد , نعيم ثاني , الراوي , خاشع محمود , يونس , مؤيد مساوه والمراتي , وليد خضير (1986) مبادئ الاحصاء , مديرية دار الكتب للطباعة والنشر . جامعة الموصل .
- 10- Saheb , E.J. , Mahdi , S.G. ; Musa , I.S. , Abdul-Karim , M.I and Khistawi , A.N. (2007) . Epidemiology of some parasitic helminths in Iraq from 2011-2015 . Iraqi. J. Sci. 58(28) : 789-796.
- 11- Musa , I.S. (2017) Incidence of helminthiasis in human in Iraq . Karbala . J. Int. J. Mod. Sci. <http://dx.doi.org/10-2016/j.kijoms.2017.08.001> .
- 12- Mazigo , H.D . ; Nawaha , F. ; Kinumghi , S.M. ; Morom , D. ; Moria , A.P. ; Wilson , S. Heukelbach , J. and Dunne , D.W. (2012) . Epidemiology and control of human Schistosomiasis in Tanzania , Parasite Vectors . 5:274 .
- 13- Avdenowo , A.F. , Oyinloge , B.E. ; Ogunyinka , B.I. and Kappo , A.P. (2015) . Impact of human Schistosomiasis in Sub-Saharan Africa . Br. J. inf. Dis. 19(2) : 196-205 .
- 14- Ghieth , M.A and Loffy , A.M. (2017) *Schistosomiasis haematobium* prevalence among haematuric patients . Beni. Suef. Un. J. Bas. Appl. Sci. 6(1) : 83-86