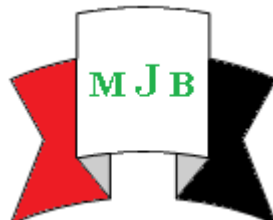


## Misuse of Antibiotics in the General Didactic Hospital of Hilla

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### **Abstract**

**Objective:** According to the hypothesis that the misuse of taking antibiotics many lead to drug resistance: we investigate the false receipts written by specialist for in-patients for antibiotics administration (Ceftriaxone & Ampicloxacillin) in the general didactic hospital of Hilla.

**Methods:** The data informations have been collected randomly from patients' files of the statistics department in the hospital of Hilla, and these data included 200 cases treated with in-patients(152 cases of Ceftriaxone and 48cases treated with Ampicloxacillin users) with different ages and different periods in both sexes. These data were analyzed statically with SPSS 8.0 statistical package.

**Results:** The results showed superiority of the using the Ceftriaxone according to age of the females( $16.3 \pm 0.03$ ) and the males ( $0.6 \pm 9.37$ ) by the significance difference ( $P < 0.05$ ), whereas Ampicloxacillin for females ( $2.6 \pm 0.29$ ) and for males ( $5.3 \pm 0.50$ ) and by the significance difference ( $P < 0.05$ ), in other hand in case of treatment of different female diseases by the Ceftriaxone show superiority of them ( $13.1 \pm 0.04$ ) ( $P < 0.05$ ) in comparison with the using in the male( $8.5 \pm 0.92$ ) ( $P < 0.05$ ) with different ages , whereas in case of using of Ampicloxacillin, shows superiority using of Ampicloxacillin in the treatment of different diseases in the male ( $3.4 \pm 0.02$ ) ( $P < 0.05$ ) in comparison with female patients ( $3.1 \pm 0.04$ ) ( $P < 0.05$ ). In the another patients the Ampicloxacillin didn't match the standard dose or intervals, with significant differences ( $p < 0.05$ ).

**Conclusions:** There are cases of misuse and right use of antibiotics (Ceftriaxone, Ampicloxacillin) of in-patients in the General Didactic Hospital of Hilla. It may also cause more severe side effects. From the results of this study we conclude that physicians must check the accuracy of using the antibiotics.

**Keyword:** Antibiotic , Ceftriaxone, Ampicloxacillin

### **سوء استخدام المضادات الحيوية في مستشفى الحلة التعليمي العام**

#### **الخلاصة**

**الهدف :** طبقاً لفرضية سوء استخدام المضادات الحيوية فإن تناول الكثير من المضادات الحيوية يؤدي الى مقاومة الدواء من قبل البكتريا : قمنا بالتحري عن الايصالات الخاطئة والموصوفة من قبل الطبيب الاختصاص للمرضى الراقدين في مستشفى الحلة التعليمي العام .

**طريقة العمل :** جمعت البيانات وبعشوائية من ملفات قسم الاحصاء في مستشفى الحلة الجراحي , وهذه البيانات تتضمن ٢٠٠ حالة من المرضى الراقدين في مستشفى الحلة العام ( ٧٦ حالة تناولت السيفترياكسون و ٢٤ حالة تناولت الامبيكلوكس ) وباعمار وجرع مختلفة من كلا الجنسين. ان هذه البيانات حطلت احصائياً ببرنامج الرزمة الاحصائية SPSS 0.8 .

**النتائج :** اظهرت النتائج تفوق في استعمال السيفترياكسون في المرضى حسب العمر بالنسبة للإناث ( $16.3 \pm 0.03$ ) بالمقارنة مع الذكور ( $0.6 \pm 9.37$ ) وبمستوى معنوية ( $p < 0.05$ ) اما الامبيكلوكس فقد اظهرت النتائج كذلك تفوق الاناث ( $2.6 \pm 0.07$ ) اما الذكور ( $5.3 \pm 0.53$ ) وبمستوى معنوية ( $p < 0.05$ ). وان استعمال السيفترياكسون في معالجة الامراض المختلفة في الاناث وبمستوى معنوية ( $p < 0.05$ ) ( $16.3 \pm 0.03$ ) فهي الاعلى بالمقارنة مع الذكور ( $8.5 \pm 0.92$ ) ، من ناحية اخرى اظهرت النتائج تفوق في استعمال الامبيكلوكس في معالجة مرضى الذكور وبمستوى معنوي ( $P < 0.05$ ) ( $3.4 \pm 0.02$ ) بالمقارنة مع الاناث فكانت ( $3.1 \pm 0.04$ ). اما المرضى الآخرون فلم يلاحظ أي استعمال خاطيء في معالجة المرضى الراقدين في مستشفى الحلة العام.

الاستنتاجات : هناك عدة حالات لسوء وصحة استخدام المضادات الحيوية ( السفترياكسون والامبيكلوكساسولين) للمرضى الراقدين في مستشفى الحلة التعليمي العام . كذلك قد تسبب اثار جانبية حادة . ومن هذه النتيجة نستنتج بأنه يجب على الاطباء ان يتحققوا من دقة استخدام المضادات.

## **Introduction**

The abuses of antibiotics are quite simple. People use them too much, and for illnesses that don't really require them[1]. It is not uncommon for people to take over the counter antibiotics for illnesses that are not caused by bacteria, or to take them in the wrong doses, lead to bacterial resistant to that type of antibiotic, and with serious diseases this can be a big problem[2]. Prescription antibiotics are often abused, often because of doctors, whether through incompetence or a money-hungry pressuring them to use cheaper, proven drugs, over-prescribe certain varieties of antibiotic, making them less and less effective [3]. The damage caused by the misuses of antibiotics goes beyond the damage caused by the disease itself [4]. The people who misuse them often suffer direct consequences, such as the killing of many the beneficial bacteria that normally reside within the body that aiding in digestion. Extremely strong antibiotics are often prescribed for hospital patients, but these dosages are usually reserved for those people who have serious infections, such as the latter stages of pneumonia. At that point possible desensitization of bacteria and side effects to the patient are the least of the doctor's concerns[5]. It is at this point only that such massive doses of antibiotics should be administered [6], these consequences are not mere hypothetical. Already illnesses are cropping up that are resistant to even the strongest antibiotics [7]. The most disturbing of these is: tuberculosis[8]. There are now over five identified strains of this deadly illness that are unusually resistant to treatment, and

the only known cure is to quarantine the patient[9]. If antibiotics are not used more responsibly in the near future, they may soon become useless in fighting certain diseases[10].

## **Objective**

According to the hypothesis that the misuse of taking antibiotics many lead to drug resistance: we investigate the false prescriptions written by specialist for in-patients for antibiotics administration (Ceftriaxone & Ampicloxacillin) in a general didactic hospital of Hilla .

## **Subjects and Methods**

The data has a collected randomly from patients' files of the statistics department in the general didactic hospital of Hilla, and these data included 200 cases of inpatients(152 cases reated with Ceftriaxone table 1,2,3 and 48 cases treatd with Ampicloxacillin users table 4) with different diseases, ages, sex and different periods. These data were analyzed statically with SPSS 8.0 statistical package. The values between groups have been compared by independent sample (F-test) and one-way ANOVA, analysis of variance. (P)values less than or equal to 0.05 and 0.01 have been evaluated (Least Significant Difference LSD) as statistical significant [11].

## **Results**

The results showed superiority of the using the Ceftriaxone according to age of the females(16 .3+0,03) and the males (0.6+9.37) by the significance difference (P<0.05), whereas Ampicloxacillin used for the females (2.6+0,29) and the males (5.3+0,50)

and by the significance difference ( $P < 0.05$ ), in other hand in case of treatment of different female diseases by the Ceftriaxone show superiority of them ( $13.1 \pm 0.04$ ) ( $P < 0.05$ ) in comparison with the using in the male ( $8.5 \pm 0.92$ ) ( $P < 0.05$ ) with different ages, whereas in case of using of Ampicloxacillin, shows superiority using of Ampicloxacillin in the treatment of different diseases in the male ( $3.4 \pm 0.02$ ) ( $P < 0.05$ ) in comparison with female patients ( $3.1 \pm 0.04$ ) ( $P < 0.05$ ). The results of antibiotic (Ceftriaxone) show that pediatric dose of Ceftriaxone for treating of (6 males & 10 females) was not correct and (6 patients-4 males, 2 female) are used false adult dose, so that presented significant differences between them ( $P < 0.05$ ). The other patients (48 males, 72 females) that are used the adult dose of Ceftriaxone, in other hand (12 patients -6 males, 6 females) are used correct pediatric ceftriaxone dose don't appear any significant differences between them ( $P < 0.05$ ), and the adult dose is correct, due to the right diagnosis and the medical league are good and availability of good health care and the disease cases did not be dangerous. In case of treating by the antibiotic (Ampicloxacillin) that is used in the

treatment (38 patients-24 males, 14 females) didn't appear any significant differences ( $P < 0.05$ ) in age over 10 years, where the dose that is used in the treatment of different diseases are correct, whereas in the (10 children patients-6 males & 4 female), used false dose.

### Conclusions

From this study we concluded:

1. The physicians & pharmacologists must be periodically refreshed about the dosage of antibiotics (dose, time and route of administrations according to the patients' age and sex).
2. The health institutions must be import and monitoring the good and comfortable drugs with little cost in order to get the well results, and did not induce resistance bacteria.
3. The correct diagnosis according to case history and patient condition.
4. The health care for the patients is play role in the recovery of the patients,
  - addition to that employing of the medications.
5. Saving the training personals to form the ever efficient of medical team especially in case of administration. physicians must check the accuracy of using the antibiotics.

**Table 1** show the using of Ceftriaxone according to (sex, age).

Years Sex	Age						Total
	1-10	11-20	21-30	31-40	41-50	51-60	
Male No.	6	12	10	16	6	4	54
Female No.	10	30	36	12	4	6	98
Total	16	42	46	28	10	10	152

**Table 2**, show the using of Ceftriaxone in the treatment of different diseases. m.: male , f. : female

Disease	patients		Age		Standard dose. (1gm/3days)								Total
	m.	f.	Child	adult	over				equal				
					Adult		child		Adult		Child		
					m.	f.	m.	f.	m.	f.	m.	f.	
Digestive	18	30	6	42	4	-	-	-	22	20	-	2	48
Respiratory	2	0	2	0	-	-	-	-	-	-	2	-	2
Gynecology	0	30	0	30	-	2	-	4	8	16	-	-	30
Urinary	4	14	0	18	-	-	-	-	4	12	-	2	18
Surgery	16	8	10	14	-	-	-	2	12	10	-	-	24
ENT	4	4	2	6	-	-	6	-	-	-	-	2	8
Others	16	6	8	14	-	-	-	4	-	14	4	-	22
<b>Total</b>	<b>60</b>	<b>92</b>	<b>28</b>	<b>124</b>	<b>4</b>	<b>2</b>	<b>6</b>	<b>10</b>	<b>46</b>	<b>72</b>	<b>6</b>	<b>6</b>	<b>152</b>
<b>Total</b>	<b>152</b>		<b>152</b>		<b>152</b>								

**Table 3** show the using of Ampicloxacillin according to (sex, age).

Years Sex	Age						Total
	1-10	11-20	21-30	31-40	41-50	51-60	
Male No.	8	2	2	10	4	6	32
Female No.	2	4	4	2	2	2	16
<b>Total</b>	<b>10</b>	<b>6</b>	<b>6</b>	<b>12</b>	<b>6</b>	<b>8</b>	<b>48</b>

**Table 4** show the using of Ambicloxacillin in the treatment of different diseases. m.: male , f. : female

Disease	Patients		Age		Standard dose (500mg/day/3 days)								Total
	m.	f.	child	Adult	Over				equal				
					Adult		Child		Adult		Child		
					m.	f.	m.	f.	m.	f.	m.	f.	
Digestive	10	4	4	10	-	-	-	2	10	-	-	2	14
Respiratory	4	0	4	0	-	-	4	-	-	-	-	-	4
Gynecology	0	6	0	6	-	-	-	-	6	-	-	-	6
Urinary	0	0	0	0	-	-	-	-	-	-	-	-	0
Surgery	4	4	4	4	-	-	2	-	4	-	-	2	8
ENT	4	0	4	0	-	-	-	-	-	-	4	-	4
Others	4	8	6	6	-	-	-	2	-	6	4	-	12
<b>Total</b>	<b>26</b>	<b>22</b>	<b>22</b>	<b>26</b>	<b>-</b>	<b>-</b>	<b>6</b>	<b>4</b>	<b>20</b>	<b>6</b>	<b>8</b>	<b>4</b>	<b>48</b>
<b>Total</b>	<b>48</b>		<b>48</b>		<b>48</b>								

## **Discussion**

The results of using Ceftriaxone in the treatment of different female diseases and Ampicloxacillin, may be due to different of diseases , case history and severity of the disease(acute or chronic) between male and female, or not taking antibiotics exactly as prescribed also leads to problems[12].The results of antibiotic (Ceftriaxone) showed incorrect in comparison dose and used false adult dose, this mistake may be due to efficacy of the medical personal training or without availability the right information to treat the patients, or may be the trading drugs does not well done and need to the over dose of the drug, the over dose of this antibiotic is due to presence of bacterial resistance because of misuse and over use of antibiotics[13].The other patients (24 males,36 females) that are used the adult dose of Ceftriaxone, in other hand (6 patients - 3 males ,3 females) are used correct pediatric ceftriaxone dose [7], the adult dose is correct, due to the right diagnosis and the medical league are good and availability of good health care and the disease case did not be dangerous. In case of treating by the antibiotic (Ampicloxacillin) that is used in the treatment (19 patients-12 males,7 females), where the dose that is used in the treatment of different diseases are correct, whereas in the (5children patients-3males &2female), were false dose, The failure of first line antibiotics also means that doctors have to resort to less conventional medications, many of which are more costly and associated with more-serious side effects, other consequences are the increased costs associated with prolonged illnesses, including expenses for additional tests, treatments and hospitalization, and indirect costs, such as lost income and these opinion is agreed with the

previous results[14].Also agreement with [15] that show that the antibiotic-resistant bacterial infections require stronger antibiotics. These medications often must be given through a vein and may require or hospitalization facilities.

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