Ceftriaxone Therapy Vs. Ciprofloxacin In Treatment Of Typhoid Fever In Adult Patients.

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الخلاصه

لا زالت حمى التايفويد سببا مهما من اسباب الامراض وفقدان ساعات العمل واحيانا فقدان الحياة في الدول الناميه ومنها العراق بطبيعة الحال والاهم من هذا هو ان نسبة الوفيات في هذه الدول لم تنخفض كثيرا رغم ثورة المضادات الحيويه وذلك بسبب ظهور سلالات مقاومه للمضادات الحيويه ولتحديد مدى فاعلية عقاري السفترايكسون و السبروفلوكساسين في علاج التايفويد في البالغين حيث يعد اي منهما علاجا من الخط الاول في منطقه في حين يعد ثانيا في منطقه اخرى اعتمادا على مدى حساسية سلالت السالمونيلا المسببه للتايفويد في تلك المنطقه لهذا اجريت هذه الدراسه في مستشفى الديوانيه التعليمي للفتره من كانون الاول 2008 حتى اذار 2009 حيث قسم مرضى التايفويد عشوائيا الى مجموعتين الاولى اعطيت سفترياكسون 1غم وريديا كل ثمان ساعات وشملت 100 مريض والمجموعه الثانيه وشملت 100 مريض ايضا تلفو عن طريق الفم عقار السيروفلوكساسين 500 ملغم كل 12 ساعه وكانت النتيجه ان مرضى المجموعه الاولى قد استجابو واصبحو بلا حمى خمسة ايام بعد بدء العلاج في حين استجاب 50% من مرضى المجموعه الثانيه اصبحو بلا حمى بعد سبعة ايام من العلاج مما قد يكون مؤشرا على نشوء سلالت مقاومه لعقارالسبروفلوكساسين يجب الانتباه اليه

Abstract

Patients & method: 200 patients attending to the fever consultation unit from January 2008 to March 2009 in Al-dewania teaching hospital diagnosed on the base of clinical and rising widal O titer as typhoid fever patient were randomly equally divided into two groups G1 received ceftriaxone 1gm TID and G2 received ciprofloxacin 500 mg BID, every patient was closely followed by temperature chart for 7 days.

Result: 100% of G1 patients were afebrile (5) days after commencement of treatment while only 50% of G2 patients became afebrile (7) days after treatment.

Conclusion: this probably warning that resistant for ciprofloxacin is an evolving problem in our community and ceftriaxone is the drug of choice in treatment of typhoid fever.

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Introduction

Typhoid fever is a major health problem in developing countries [3, 6] .It is amulti-organ process that is caused by salmonella & is characterized by:

1: prolonged fever.
2: sustained blood stream infection without endothelial or endocardial seeding
3: profound hypertrophy & activation of reticuloendothelial system, particularly the intestinal& the mesenteric lymphoid tissue.
4: immunologic complication such as immune complex deposition, leading to multi-organ dysfunction.
Several antibiotic are effective in enteric fever chloramphenicol, ampicilline & cotri-moxazol are important therapy but are losing their effect due to resistance in many areas of the world [1, 2].
Typhoid fever carried a case fatality rate of about 12% in the preantibiotic era which was reduced to about 4% after chloramphenicol became available. Case fatality rates > 10% continue to be reported in developing countries despite availability of antibiotics[5] Flouroquinolon & ceftriaxone are used in treatments many consider flouroquin as the drug of choice & ceftriaxone useful in treatment but have slightly increase treatment failure rate [4]. Any how in our country I found no real study regarding the efficacy of both drugs in treatment of typhoid fever

Materials and methods

Study population : Between January 2008 and March 2009, 2008 adults aged 18-55 yr who were presented to the fever consultation unit in Aldewania teaching hospital with sustained high temperature (>=39 deg C) with no signs and symptoms of major respiratory tract infection, urinary tract infection, gastroenteritis, hepatitis or meningitis and all patients were followed for rising widal. 0 titer blood test and diagnosed as having typhoid fever.
Exclusion criteria
1: Those who are less than 18 years.
2: pregnant &lactating women.
3: patient with confusion & delirium.
The patients were randomized into tow groups.
G1 received ceftriaxone 1gm IV 3 times daily.
G2 received ciprofloxacin 500 mg orally twice daily.

Oral temp. Checked & recorded twice daily for every patient where the patient or his relative inform how to use the mercury thermometer and the temp. Chart that I provide and phone NO. to answer any possible questions. The patient advised to visit the unit every other day.
Non responders are those who continue to have fever 7 days after the treatment.
Routine examination of blood, urine and stool was carried out in all patients. Chest and abdominal X-rays were done in patients where it was indicated. Liver function tests, kidney function tests and examination of cerebrospinal fluid were performed as per indication

Result

All the 200 patients complete the 7 days course of treatment relief of symptoms was seen from the 2nd day onward in G1 whereas that occurred from the 4th day onward in G2 .
Fever was fully subsided in all G1 patients after 5 days of treatment while the fever was fully subsided at day 7 in 50% of G2 patient while the other 50% continue to have high grade fever as in table 3

Table -1: sex wise distribution

Group	No. of pt.	male	female
G1	100	64	36
G2	100	70	30
Total	200	134	66

Table (1)shows no significant differences between both groups regarding the sex distribution

Table -2:shows the age distribution of the patients

Age group	G1	G2	Total
(18-29) years	42	35	77
(30-39) years	32	36	68
(40-49) years	20	18	38
(50-55) years	6	11	17
total	100	100	200

Table -3: symptom wise distribution

symptom	N0. Among G1	No. Among G2
Fever	100(100%)	100(100%)
Frontal headache	90(90 %)	92(92%)
Cough	20(20%)	25(25%)
Nausea	76(76%)	70(70%)
Vomiting	25(25%)	23(23%)
Abdominal pain	80(80%)	76(76%)
constipation	31(31%)	33(33%)
splenomegally	36(36%)	30(30%)

Fever was present in all patients in both groups
Frontal headache was reported in 90% , 92% of patients in G1 and G2 respectively
Cough was reported in 20% of patients in G1and 25% of patient in G2 Nausea was reported in 76% , 70% in G1, G2 respectively.
Vomiting was reported in 25%, 23% in G1, G2 respectively.

Table -4: shows the time required for the specific symptom to improve

symptom	No.(%)of cured patient at 3rd day	No. (%) of cured patient at 7th day	No (%) of cured patient at 3rd day	No (%) of cured patient at 7th day
fever	60 (60%/)	100 (100%)	10(10%)	55(55%)
Frontal headache	80(80%)	90(100%)	80(80%)	50(54%)
cough	10(50%)	10(50%)	5(20%)	5(20%)
vomiting	5(20%)	5(20%)	-ve	3
Abdominal pain	60 (75%)	80 (100%)	40 (52%)	40 (52%)
constipation	31(100%)		10 (30%)	12 (36%)
splenomegally	2 (1%)	36 (100%)	5 (2%)	10 (5%)

Discussion

A randomized study comparing ceftriaxone (3 gm given parentally) to ciprofloxacin (500mg) given orally,twice a day for 7days for rising O titer widal positive typhoid fever patients was conducted in Aldewanya teaching hospital from January 2008 to March 2009 as in table -4- 100% of those receiving ceftriaxone were defervesce 5 days after treatment while 50% from those receiving ciprofloxacin became afebrile 7 days after commencement of treatment the result make no doubt that resistant for ceftriaxone not available but those failing to respond in the G2 probably resistant among other factor like patients compliance and affected bioavailability by foods or drinks any how I can confidently say that a major subset from non responders they develop a real resistance for ciprofloxacin and that in fact correlate with what has been reported in other countries recently [7].Resistance to ampicillin, chloramphenicol, trimethoprim -sulfamethoxazole and streptomycin is now common, and these agents have not been used as first line treatment now for almost 20 years. Typhoid that is resistant to these agents is known as multidrug-resistant typhoid (MDR typhoid).Ciprofloxacin resistance is an increasing problem, especially in the Indian subcontinent and Southeast Asia. Many centers are therefore moving away from using ciprofloxacin as first line for treating suspected typhoid originating in South America, India, Pakistan, Bangladesh, Thailand or Vietnam. For these patients, the recommended first line treatment is ceftriaxone

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