Società Medico Chirurgica di Ferrara


RENDICONTO
DELLE ADUNANZE
MEDICO-CHIRURGICA
DI FERRARA

Antibiotico resistenza dei batteri - Un problema da risolvere

Sabato 5 novembre 2016

Aula Magna Nuovo Arcispedale S. Anna
Cona, Ferrara

Le problematiche infettive di genere

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Problema

44 anni, Impiegato/a, fuma 15 sigarette al di, mai ricoverato in ospedale. Tosse e febbre da 3 giorni. Questa notte vomito e nausea

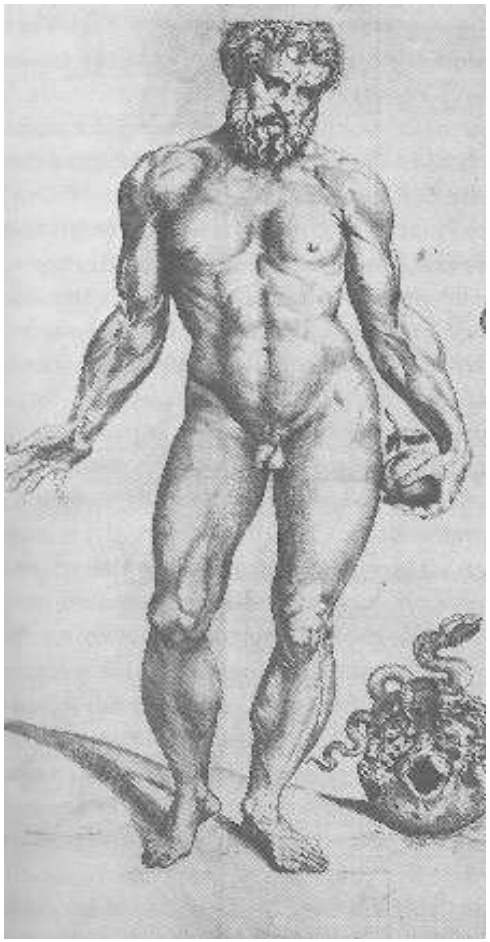
Obiettività polmonare normale;
linfonodi normali;
faringe arrossata

smettere di fumare
aereosol con cortisonici e mucolitici;
antinfiammatori-antipiretici;
copertura antibiotica;
antiemitico

Altezza 182 cm
Peso 85 Kg, BMI 26,5

Altezza 160 cm
Peso 57 Kg, BMI 23

Siamo sicuri che i percorsi diagnostico terapeutici che abitualmente applichiamo siano corretti?



peso corporeo

massa magra

massa grassa

velocità di svuotamento gastrico e secrezione

motilità intestinale

velocità di filtrazione glomerulare

PARAMETRO	UOMO	DONNA	GRAVIDANZA
Peso (Kg)	85	57	72
Altezza (cm)	182	160	160
Superfice corporea (m2)	2,12	1,76	1,81
Acqua Totale (lt)	42	29	33

Sex Differences in Infectious Diseases–Common but Neglected

Jan van Lunzen[1,2] and Marcus Altfeld[2,3]

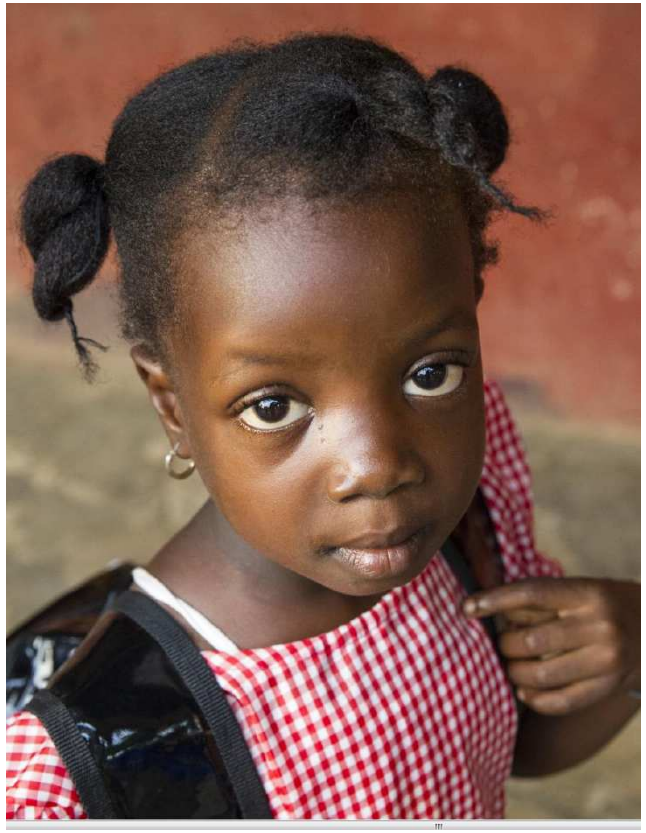
[1]Infectious Diseases Unit, University Medical Center Hamburg-Eppendorf, [2]Heinrich-Pette-Institute, Leibniz Institute for Experimental Virology, Hamburg, Germany; and [3]Massachusetts Institute of Technology and Harvard, Ragon Institute of Massachusetts General Hospital, Boston

This applies to infections with viruses, bacteria, and parasites, including the pathogens most relevant for human health, causing malaria, tuberculosis, AIDS, hepatitis, and influenza.

Only recently, the biological pathways responsible for these sex-based differences in the manifestations of infectious diseases have been started to be unveiled.

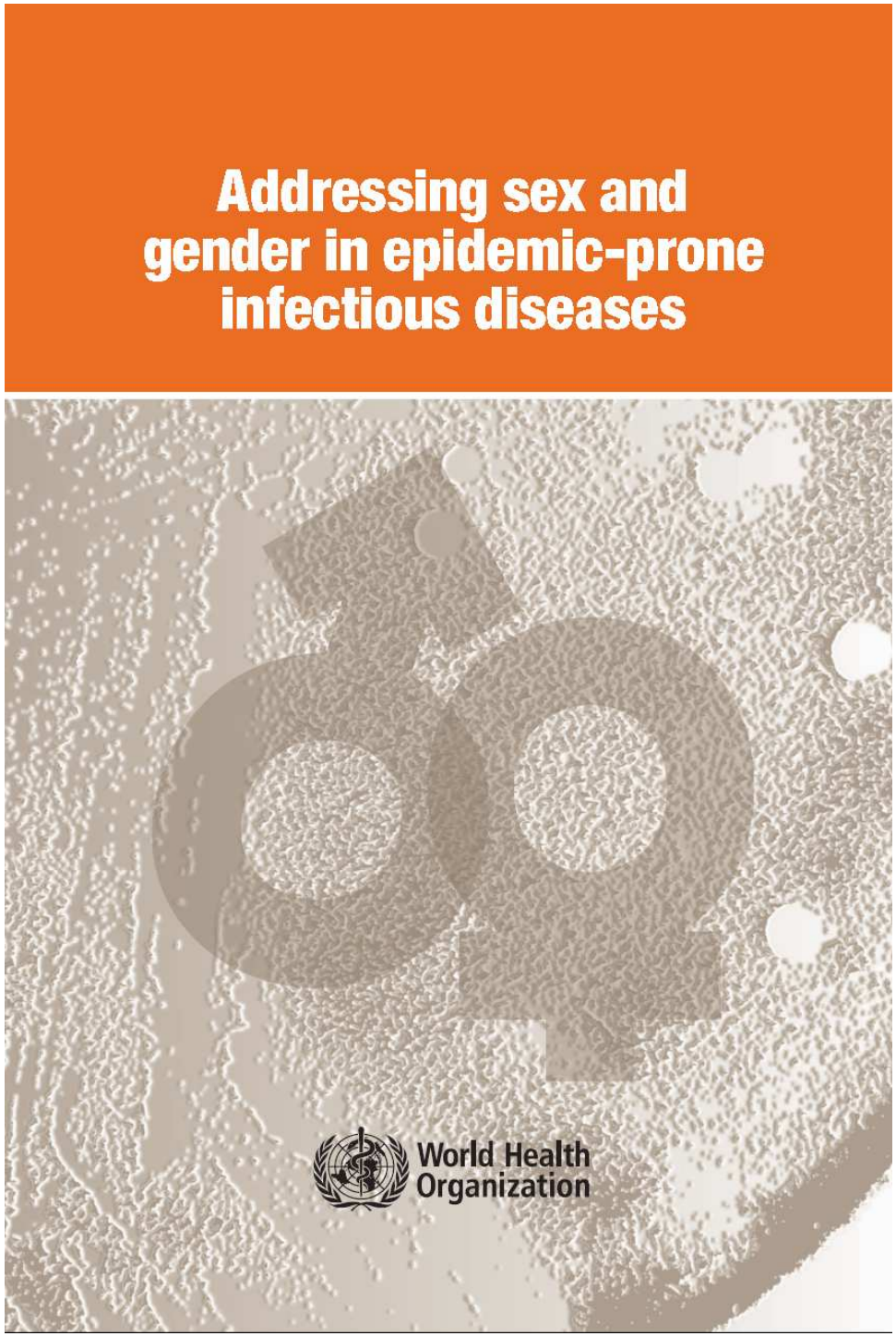
Differenze tra maschi e femmine

- **nella suscettibilità alle malattie infettive**
- **di esposizione a malattie infettive**
- **di assistenza sanitaria e di trattamento**
- **nelle conseguenze di malattie infettive**



Cause di tale differenza

Implicazioni di differenze di sesso e di genere tra per sorveglianza e risposta all'infezione



BIOLOGICAL SEX DIFFERENCES

Fundamental differences between males and females exist at every biological level, from that at the organism as a whole, to organs and organs systems, to individual cells.

These biological differences are complex, and may confer advantages either to males or females depending on the infectious agent.

GENDER-RELATED DIFFERENCES

Gender influences both patterns of exposure to infectious agents and the treatment of infectious disease.

- Time spent at home and away from home
- Responsibility for caring for livestock
- Health care received
- Responsibility for caring for the sick
- Scientific knowledge about treatment

DISEASE	INFANTS	YOUNG CHILDREN (AGE 1–5 YEARS)	POSSIBLE REASONS FOR MALE FEMALE DIFFERENCES SUGGESTED BY INVESTIGATORS
Diarrhoeal disease	Incidence higher for males	Mortality rates often higher for females despite similar or slightly higher incidence rates for males.	Higher incidence rates for male children may be caused by greater male mobility. Higher female case-fatality rates found in some countries may be due to poorer health care.
Acute lower respiratory infections and pneumonia	Mortality rates higher for males	Sex differences in mortality for young children vary. Generally only small differences in incidence rates.	Mortality rates higher for males in infancy probably due to less mature lungs in boys during infancy. This disadvantage abates in early childhood.
Neonatal tetanus	Mortality rates higher for males		It is not known why mortality rates are higher for males.
Measles		Similar infection rates, but higher female mortality rates observed.	Possibly less adequate medical care is provided to girls. Possibly girls are exposed to a larger dose in the home.
Dengue		Some evidence to suggest that girls are more likely to have dengue shock syndrome than boys.	Biological reasons, related to a more aggressive immune system response have been cited as possible causes of more severe illness in girls.

Sex differences in morbidity and mortality for selected epidemic-prone infectious diseases amog infants and young children

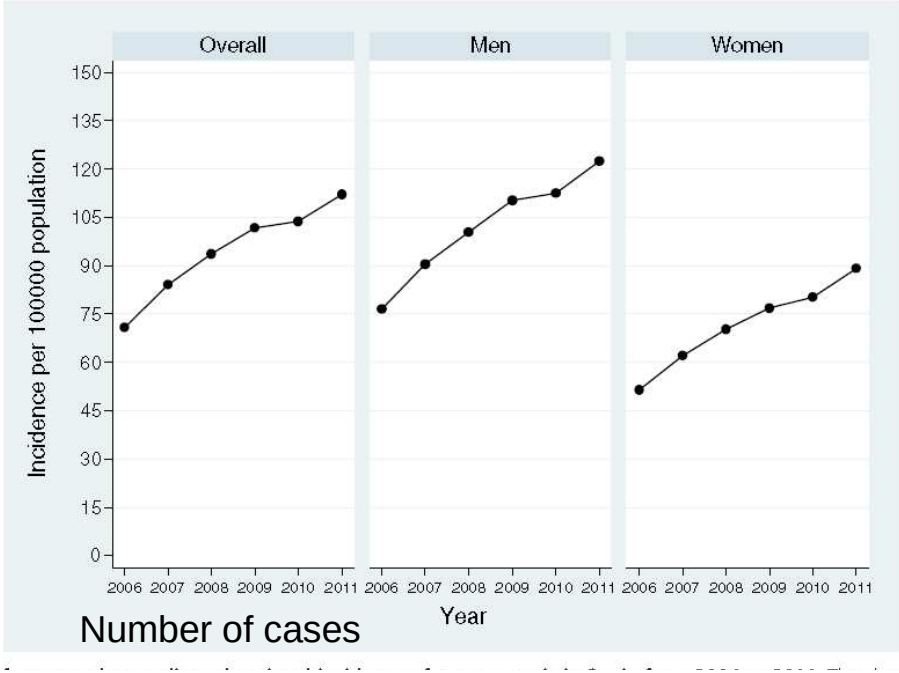
Epidemiology and recent trends of severe sepsis in Spain: a nationwide population-based analysis (2006-2011)

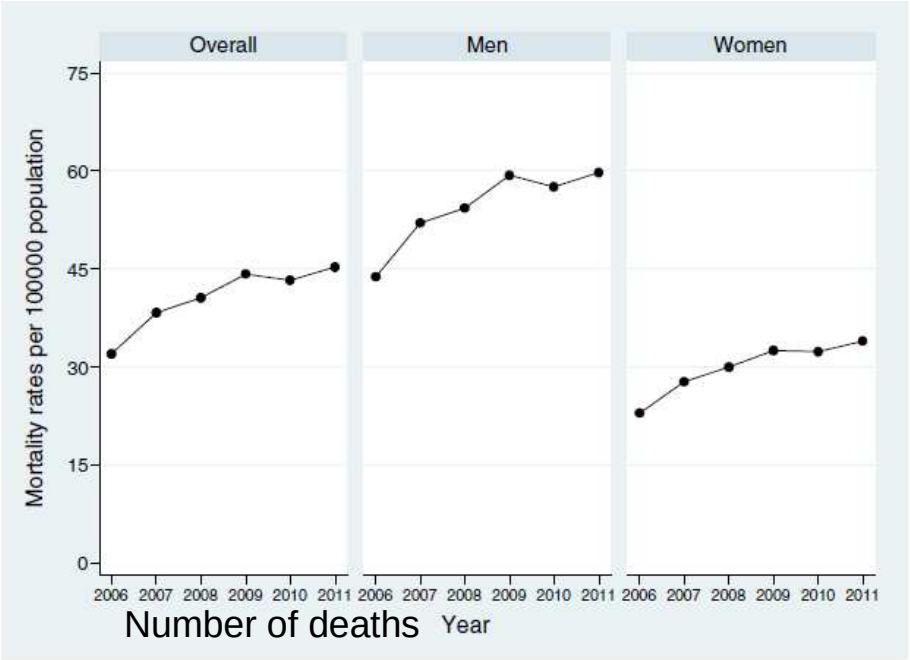
Bouza *et al. BMC Infectious Diseases* 2015, **14**:717
http://www.biomedcentral.com/1471-2334/14/717

Carmen Bouza*, Teresa López-Cuadrado, Zuleika Saz-Parkinson and José María Amate-Blanco

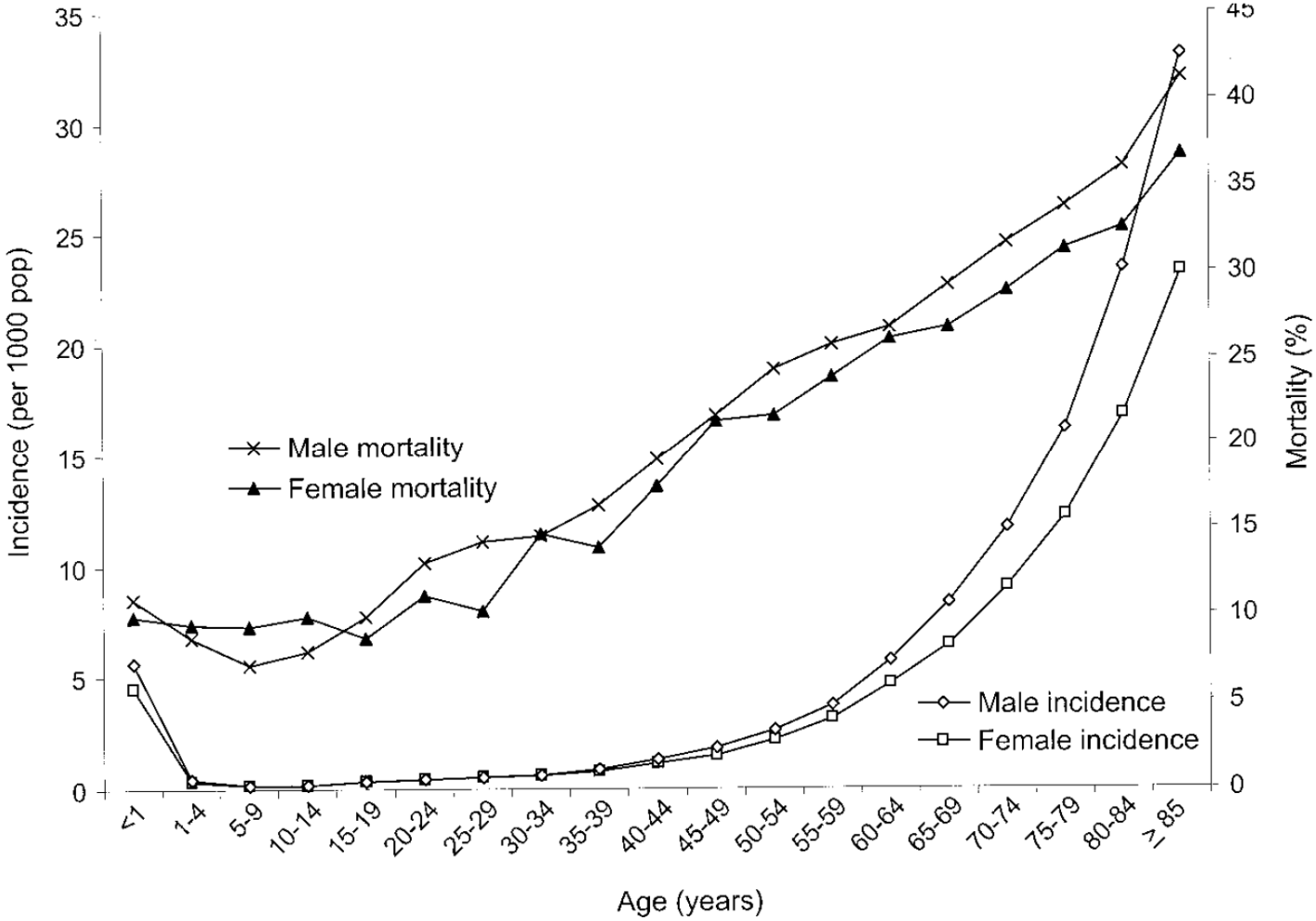
Over the 6-year period we identified 240939 cases of severe sepsis nationwide representing 1.1% of all hospitalisations. Overall 58% of cases were men, 66% were over the age of 65 and about 67% had associated comorbidities.

This study shows that hospitalizations with severe sepsis are frequent and associated with substantial in-hospital mortality





Angus DC et al. Crit Care Med 2001;29(7):1303-10.



National age-specific incidence and mortality rates for all cases of severe sepsis by gender, excluding those with HIV disease. National estimates are generated from the seven-state cohort using state and national age-specific population estimates from the National Center for Health Statistics and the U.S. Census.

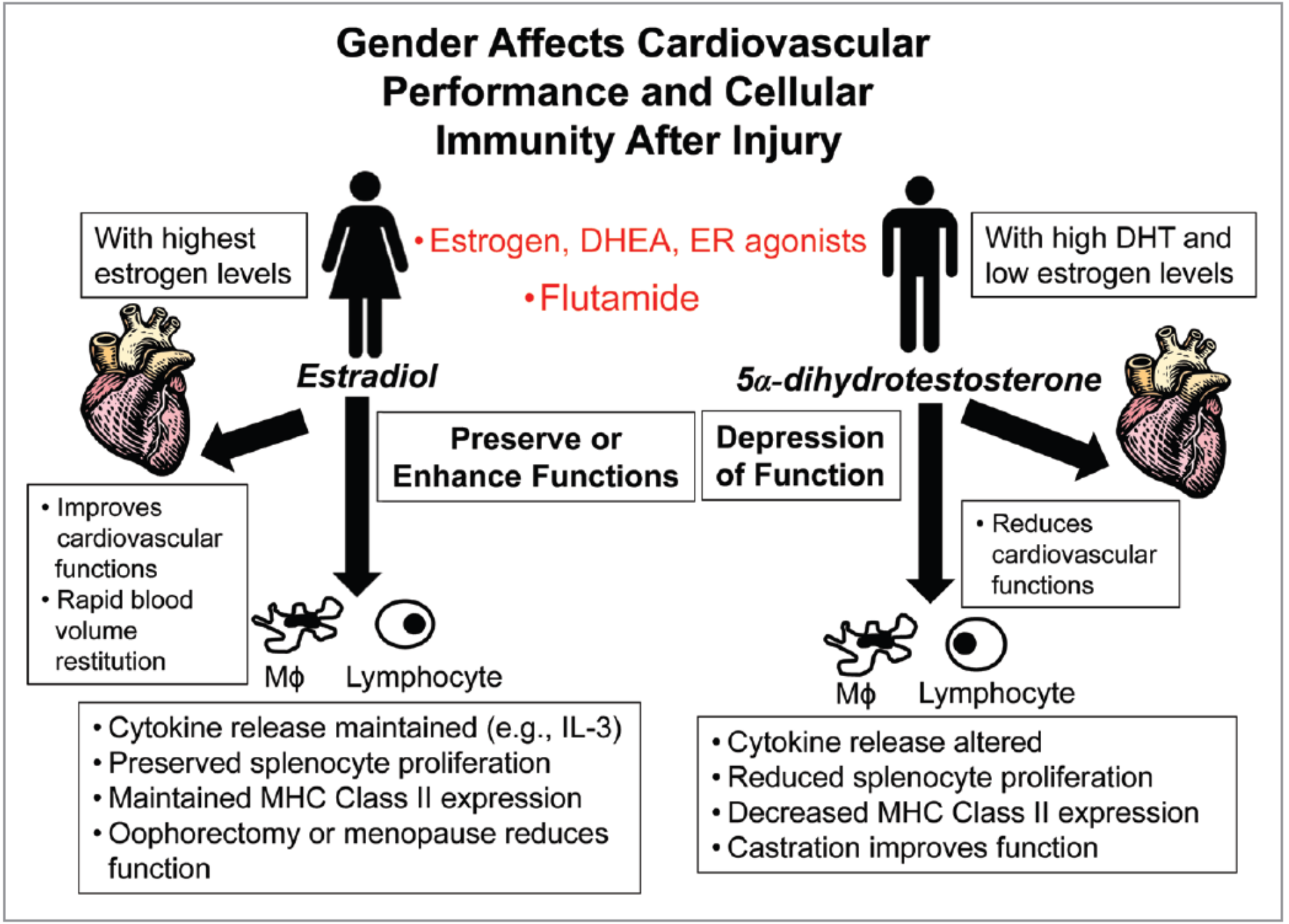
Impact of Gender on Sepsis Mortality and Severity of Illness for Prepubertal and Postpubertal Children

Ghuman AK, Newth CJL, Lhemani RG - J Pediatr 2013; 163: 835-40.

- Prepubertal females (n = 272; 9.9% mortality) and prepubertal males (n = 303; 10.9% mortality) had similar mortality and severity of illness .
- Postpubertal females (n = 233; mortality, 5.6%) had lower mortality than postpubertal males (n = 212; mortality, 11.8%; P = .03).
- Postpubertal children, female gender was independently associated with a lower initial severity of illness (Pediatric Index of Mortality PIM 2 ROM: OR, 0.77; 95% CI, 0.62-0.96; P = .02).

	Females (n = 233)	Males (n = 212)	*P* value
Age, months, median (IQR)	211.3 (201.8-230.2)	210.4 (201.7-230.3)	.77*
Mechanical ventilation, n (%)†	35 (24.3)	45 (32.8)	.15‡
Dialysis, n (%)§	14 (11.8)	10 (8.8)	.59‡
PICU LOS, days, median (IQR)	2.50 (1.37-5.67)	2.90 (1.30-6.35)	.66*
PIM 2 ROM, median (IQR)	0.013 (0.009-0.041)	0.013 (0.010-0.050)	.02*
Mortality, n (%)	13 (5.6)	25 (11.8)	.03‡

These outcome differences in postpubertal children may reflect a hormonal influence on the response to infection or differences in underlying comorbidities, source of infection, or behavior.


Gender Affects Cardiovascular Performance and Cellular Immunity After Injury
With highest estrogen levels
• Estrogen, DHEA, ER agonists
• Flutamide
With high DHT and low estrogen levels
Estradiol
5α-dihydrotestosterone
Preserve or Enhance Functions
Depression of Function
• Improves cardiovascular functions
• Rapid blood volume restitution
• Reduces cardiovascular functions
Mϕ
Lymphocyte
Mϕ
Lymphocyte
• Cytokine release maintained (e.g., IL-3)
• Preserved splenocyte proliferation
• Maintained MHC Class II expression
• Oophorectomy or menopause reduces function
• Cytokine release altered
• Reduced splenocyte proliferation
• Decreased MHC Class II expression
• Castration improves function

Gender Differences in Human Sepsis

Jörg Schröder, MD; Volker Kahlke, MD; Karl-Hermann Staubach, MD; Peter Zabel, MD; Frank Stüber, MD

Background: In animal studies, gender differences were related to hormo associated with a

Objective: In in patients with of survival, sex as anti-inflamm

Setting: Surgi hospital.

Patients: Fifty with surgical se

Measurement study, tumor ne ity and plasma linked immunos estradiol (using days 1, 3, 5, 7, 1 were no differe (mean age, 55.4 or cause and severity of sepsis (Acute Physiology and Chronic Health Evaluation II score, 17.3 for women and 18.5 for men; multiple organ dysfunction score, 9.9 vs 10.8, respectively). Although no difference could be found in the ay 1 to day 28, the fferent in women rate was 70% (23 19) in female pa- y of tumor necro- after diagnosis of on day 10 ($P<.05$, rrection), whereas tin 6 bioactivity. in 10 levels com- hat reached a sig- .05). Total testos- nge for men, and oth men and post- for women.

dy, gender differ- is, with a signifi- which may be re- natory mediators. nflammatory and mportant for fur- ther therapeutic interventions in sepsis.

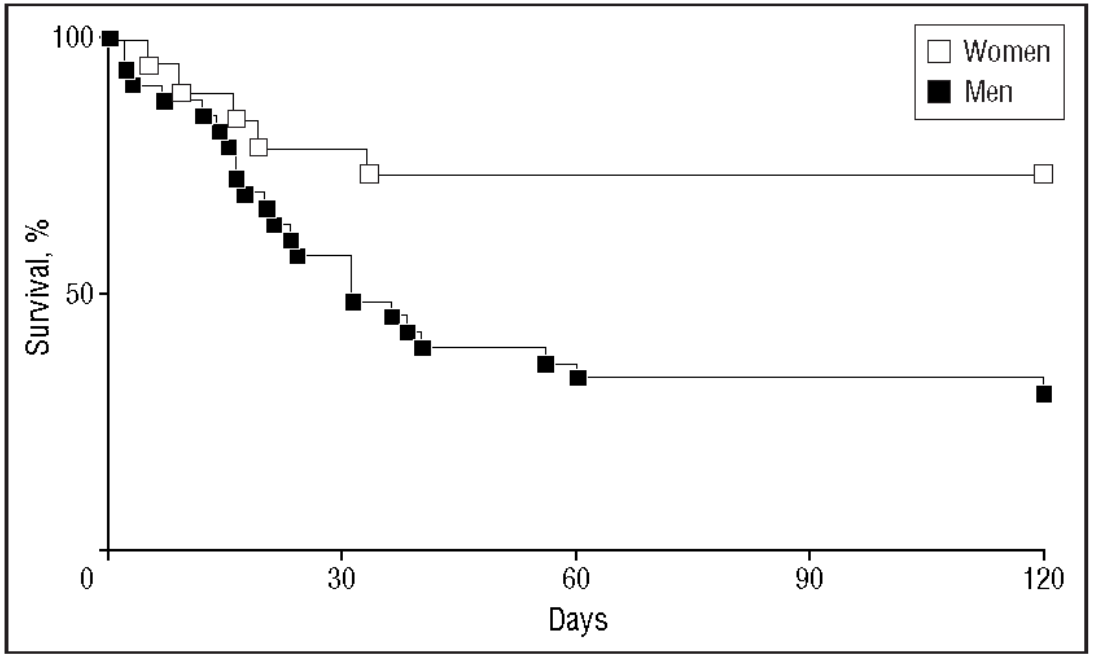
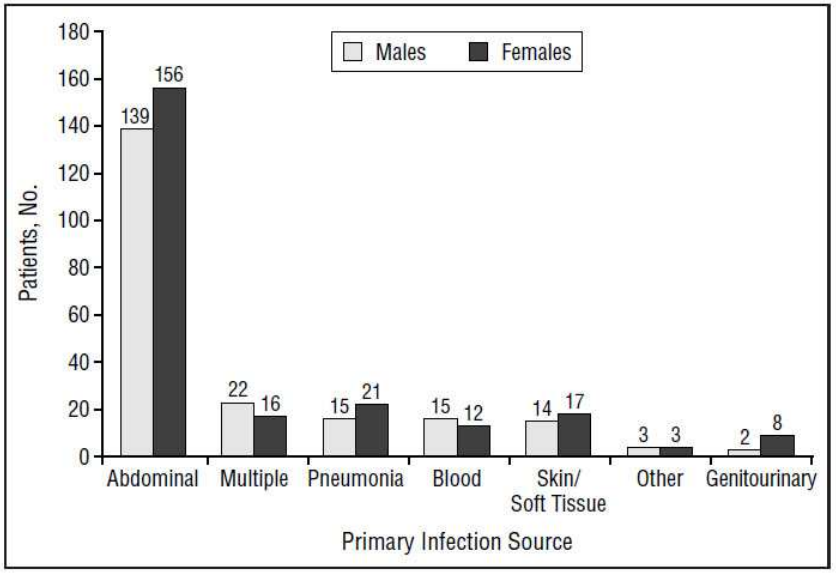
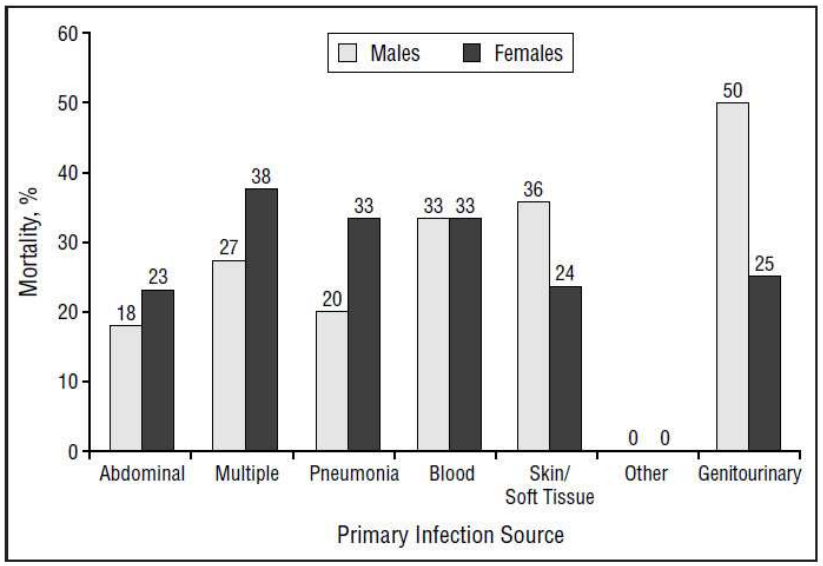


Figure 2. *Kaplan-Meier hospital survival analysis for female and male patients. Survival was significantly different between men and women with severe sepsis ($P<.008$ for hospital survival, log-rank test).*

Arch Surg. 1998;133:1200-1205



Preponderance of intra-abdominal infections among patients with sepsis admitted to the surgical intensive care unit. However, there was no difference in case mix between males and females.



Mortality rates as a function of primary source of infection. No differences between females and males.

Gender-Based Differences in Outcome in Patients With Sepsis

Soumitra R. Eachempati, MD; Lynn Hydo, RN; Philip S. Barie, MD, FCCM, FCCS

- 1348 patients admitted in surgical intensive centers.
- There were no demographic differences between genders.
- In multivariate analysis APACHE III (p< 001), maximal multiple dysfunction score (P < 001) and female gender (p < 0,02) predicted mortality.
- The difference in mortality rates between female and male patients was not significant, except in octogenarians.

Arch Surg. 1999;134:1342-1347

Mortality in sepsis and its relationship with gender

Nasir N,Jamil B, Siddiqui S, Talat N, Khan F, HussainR

Pak J Med Sci 2015;
31(5):1201-1206.

ABSTRACT

Background and Objective: Sepsis remains a leading cause of death across the world, carrying a mortality rate of 20-50%. Women have been reported to be less likely to suffer from sepsis and to have a lower risk of mortality from sepsis compared to men. The objective of this study was to determine the relationship between gender and mortality in sepsis, and compare cytokine profiles of male and female patients.

Methods: This was a prospective case series on 97 patients admitted with sepsis. Clinical and microbiological data was gathered, blood samples were collected for cytokine (IL-10, IL-6 and TNFa) levels and patients were followed up for clinical outcome.

Results: There were 54% males and 46% females, with no significant difference of age or comorbids between genders. Respiratory tract infection was the commonest source of sepsis, and was more common in females (60%) compared to males (39%) (p=0.034). Males had a higher mortality (p=0.048, RR 1.73) and plasma IL-6 level(p=0.040) compared to females. Mean IL-6 plasma level was significantly (p<0.01) higher in patients who died vs. who recovered.

Conclusion: Our study shows that males with sepsis have a 70% greater mortality rate, and mortality is associated with a higher IL-6 plasma level.

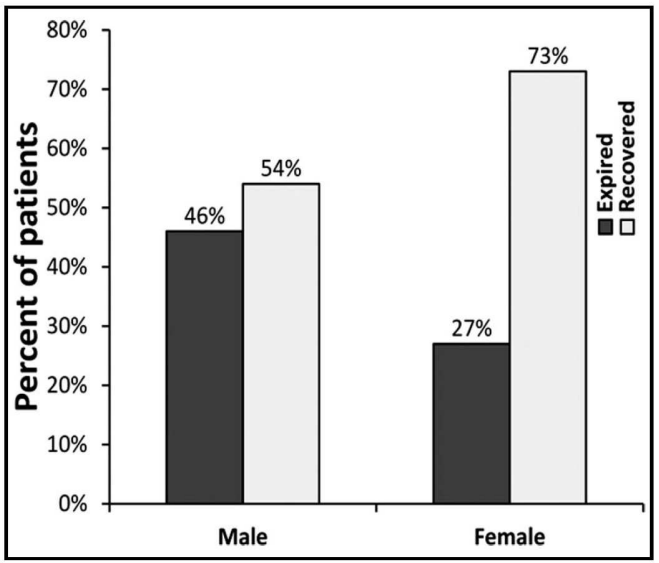


Fig.1: Bar chart comparing proportion of male and female patients expired and recovered. Difference was significant (p=0.048, Chi square test).

Gend Med. 2(

Gender D … ere Sepsis and Septi

Anthony P. P … PhD[3], and Susan G. Fisher, Ph

[1]Departments …

[2]Departments …

[3]Departments … Medical Center

[4]Departments … edical Center

Unadjust …

Outcome			p value*
Hospital M … (n = 6,359 …			6) 0.006
ICU Morta … (n = 4,310 …			7) 0.01
Independe … (n = 3,620 …			5) 0.0006

* Chi-square …

Associations Between Independent Variables and Hospital Mortality

Covariate	Bivariate analysis * OR (95% CI)	Bivariate analysis * p value	Multivariable analysis † OR (95% CI)	Multivariable analysis † p value
Patient characteristics				
Female gender	1.09 (1.02 – 1.16)	0.006	1.11 (1.04 – 1.19)	0.002
Age quintiles	1.27 (1.24 – 1.30)	< 0.001	1.20 (1.16 – 1.23)	< 0.001
Dependent functional status at admission	1.53 (1.43 – 1.62)	< 0.001	1.30 (1.18 – 1.43)	< 0.001
African-American race	0.95 (0.86 – 1.04)	0.24	0.89 (0.77 – 1.04)	0.137
Admitted from health care facility	1.38 (1.30 – 1.47)	< 0.001	1.49 (1.37 – 1.62)	< 0.001
Previous ICU admission this hospitalization	1.19 (1.03 – 1.37)	0.02	ns ‡	ns
CPR within 24 hours of ICU admission	3.22 (2.81 – 3.70)	< 0.001	1.81 (1.56 – 2.11)	< 0.001
Medical patient (vs. surgical)	1.23 (1.13 – 1.34)	< 0.001	1.55 (1.36 – 1.76)	< 0.001
Medicaid or self-pay vs. other insurance	0.71 (0.65 – 0.78)	< 0.001	ns	ns
Comorbidity				
Chronic liver disease	1.84 (1.57 – 2.15)	< 0.001	1.90 (1.55 – 2.34)	< 0.001
Active cancer within 5 years	1.87 (1.72 – 2.02)	< 0.001	1.34 (1.20 – 1.50)	< 0.001
Chronic cardiovascular disease	1.63 (1.44 – 1.83)	< 0.001	1.19 (1.01 – 1.40)	0.037
Chronic renal disease	1.48 (1.31 – 1.68)	< 0.001	ns	ns
Chronic respiratory disease	1.16 (1.05 – 1.29)	0.002	1.15 (1.04 – 1.28)	0.009
Immunocompromise	1.86 (1.71 – 2.04)	< 0.001	1.53 (1.34 – 1.75)	< 0.001
Severity of illness variables				
Neurologic dysfunction	1.47 (1.30 – 1.65)	< 0.001	1.23 (1.05 – 1.44)	0.01
Cardiovascular dysfunction	1.97 (1.85 – 2.10)	< 0.001	1.24 (1.11 – 1.40)	< 0.001
Respiratory dysfunction	1.26 (1.19 – 1.34)	< 0.001	ns	ns
Elevated serum lactate	2.64 (2.39 – 2.91)	< 0.001	1.14 (0.99 – 1.32)	0.067
Acute renal failure	2.67 (2.47 – 2.88)	< 0.001	1.36 (1.24 – 1.50)	< 0.001
Hepatic dysfunction	1.44 (1.29 – 1.60)	< 0.001	1.15 (0.97 – 1.35)	0.104
Hematologic dysfunction	1.60 (1.48 – 1.73)	< 0.001	1.36 (1.22 – 1.53)	< 0.001
APACHE II score (per 1 point increase in score)	1.11 (1.10 – 1.11)	< 0.001	ns	ns
SAPS II score (per 1 point increase in score)	1.06 (1.05 – 1.06)	< 0.001	1.04 (1.03 – 1.04)	< 0.001

- A large regional Italian cohort included 3,902 patients (63.5% male). Female were significantly older than male patients (66 ± 16 years vs. 63 ± 16 years, P < 0.001).
- Intensive Care Unit (ICU) mortality was similar in men and women in the whole cohort (20.1% vs. 19.8%, P = 0.834), but in patients with severe sepsis was significantly greater in women than in men (63.5% vs. 46.4%, P = 0.007).

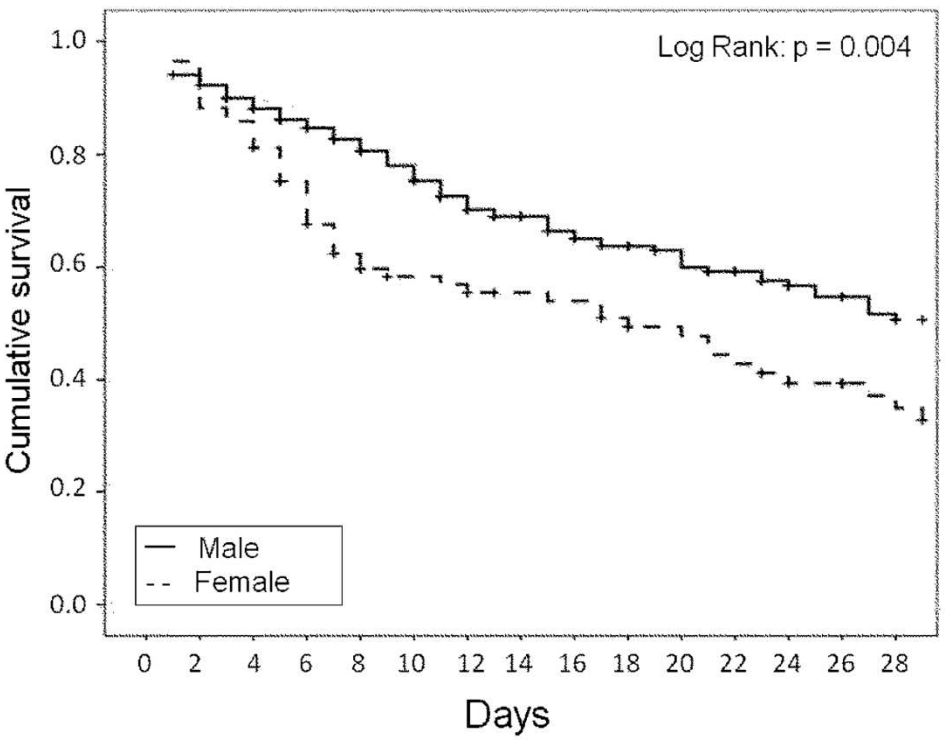


Figure 2 Kaplan-Meier survival curves representing 28-day survival according to gender in patients with severe sepsis.

Female gender was independently associated with a higher risk of ICU death in patients with severe sepsis (odds ratio = 2.33, P = 0.009) but not in the whole cohort (odds ratio = 1.07, 95% CI = 0.87 to 1.34).

The influence of gender on the epidemiology of and outcome from severe sepsis

Sakr *et al. Critical Care* 2013, **17**:R50

Variables	OR‡	95% CI	p Value
Overall matched cohort (608 women, 1,000 men)			
After matching on risk factors for death			
ICU mortality	0.80	0.62–1.03	0.09
Hospital mortality	0.78	0.61–1.01	0.06
After adjusting for confounding variables†			
ICU mortality	0.75	0.58–0.98	0.03
Hospital mortality	0.75	0.57–0.97	0.02
Patients > 50 yr old (481 women, 778 men)			
After matching on risk factors for death			
ICU mortality	0.73	0.55–0.97	0.03
Hospital mortality	0.71	0.54–0.94	0.02
After adjusting for confounding variables†			
ICU mortality	0.70	0.52–0.94	0.018
Hospital mortality	0.69	0.52–0.93	0.014
Patient < 50 yr old (127 women, 222 men)			
After matching on risk factors for death			
ICU mortality	1.33	0.72–2.46	0.36
Hospital mortality	1.34	0.73–2.44	0.35
After adjusting for confounding variables†			
ICU mortality	1.01	0.51–1.99	0.98
Hospital mortality	1.01	0.52–1.97	0.98

Influence of gender mortality in patients with severe sepsis

- **Overall hospital mortality was significantly lower in women (OR, 0.75; p 0.02).**
- **Hospital mortality was not significantly different between men and women in the younger group [OR, 1.01; p 0.98].**
- **In the group > 50 years old, hospital mortality was significantly lower in women (OR, 0.69; p 0.014).**
- **Level of care, as assessed using the nine equivalents of nursing manpower use score, was identical in men and women.**

Adrie C et al. Chest 2007; 132: 1786-93.

Predictors of *Clostridium difficile* infection severity in patients hospitalised in medical intensive care

Nagham Khanafer, Abdoulaye Touré, Cécile Chambrier, Martin Cour, Marie-Elisabeth Reverdy, Laurent Argaud, Philippe Vanhems

World J Gastroenterol 2013 November 28; 19(44): 8034-8041

Factors independently associated with severe *Clostridium difficile* infection among patients in medical intensive care unit

Variables	Unadjusted OR (95%CI)	*P* value	Adjusted OR (95%CI)	*P* value
Glasgow coma score	1.16 (0.99-1.36)	0.15	-	
Diabetes mellitus	4.89 (1.00-23.93)	0.04	-	
Previous PPI exposure	2.55 (0.67-9.66)	0.17	-	
Coamoxiclav (in the previous 8 wk)	2.43 (0.65-9.07)	0.18	-	
Fluoroquinolones (in the previous 8 wk)	6.0 (1.12-32.28)	0.026	9.29 (1.16-74.28)	0.036
C-reactive protein (mg/L; 10 mg/L increments)	1.10 (1.02-1.18)	0.014	1.11 (1.02-1.21)	0.021
Male gender	5.11 (0.95-27.55)	0.045	8.45 (1.06-67.16)	0.044

Gender Differences in Rates of Carriage and Bloodstream Infection Caused by Methicillin-Resistant *Staphylococcus aureus*: Are They Real, Do They Matter and Why?

Hilary H

[1]Departme

Molecular

- Males are more prone to bacterial sepsis, but some studies suggest females may have a poorer prognosis from BSI.
- Hand-hygiene behavior varies according to gender.
- Males are less compliant, which in turn may predispose them to higher colonization and infection rates.
- Female hormones such as estrogen affect the expression of virulence factors in Pseudomonas aeruginosa, and although not studied, this may also apply to S. aureus.

There is

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Female

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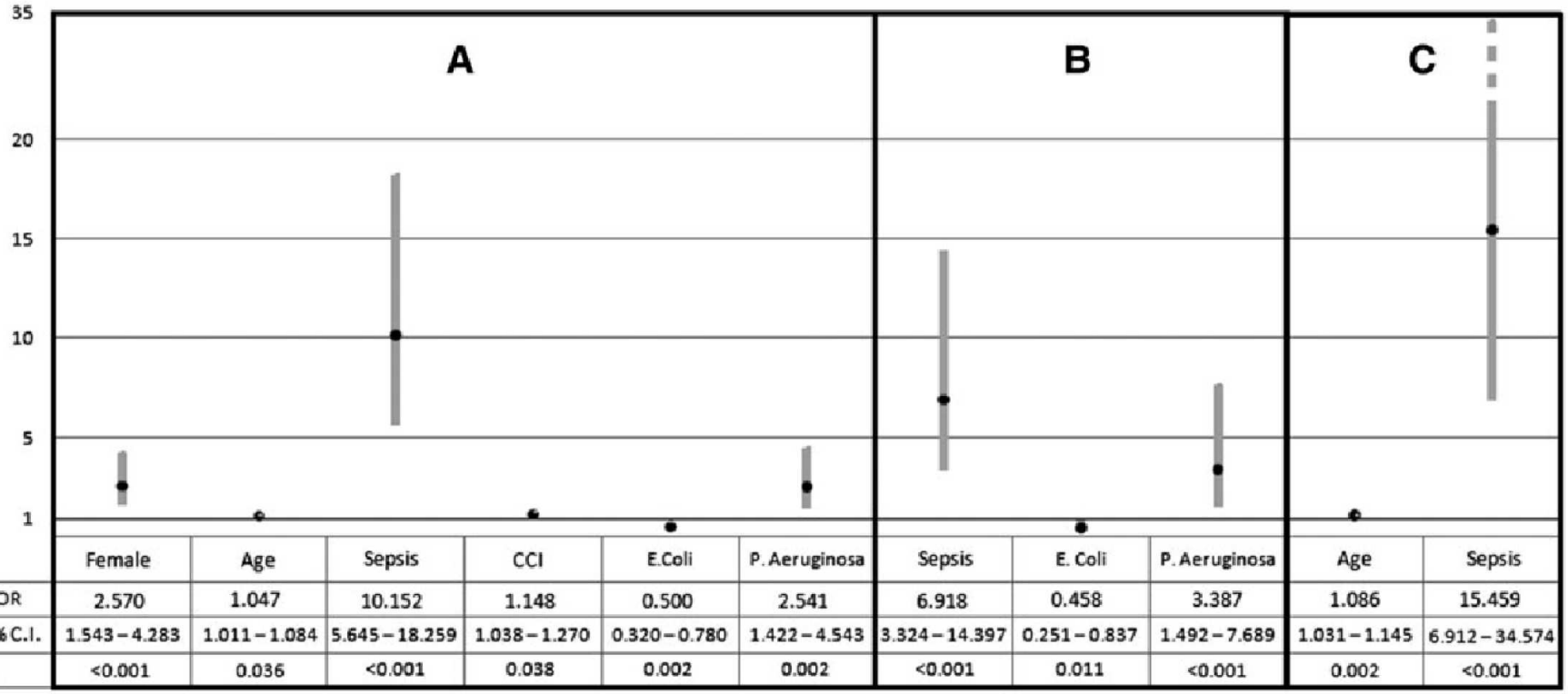
gender a

specific infection prevention campaigns, and other factors such as the possible role of contact sports and occupation.

- 2266 patients with Urinary tract infections (UTIs) were considered (73,7% women), 116 developed sepsis and 84 (54,8% female) with a fatal outcome.
- In hospital mortality was associated with P. aeruginosa infection, female gender, Charlson comorbidity index, age and E. coli infection.



	Female	Age	Sepsis	CCI	E.Coli	P. Aeruginosa	Sepsis	E. Coli	P. Aeruginosa	Age	Sepsis
● OR	2.570	1.047	10.152	1.148	0.500	2.541	6.918	0.458	3.387	1.086	15.459
95% C.I.	1.543 – 4.283	1.011 – 1.084	5.645 – 18.259	1.038 – 1.270	0.320 – 0.780	1.422 – 4.543	3.324 – 14.397	0.251 – 0.837	1.492 – 7.689	1.031 – 1.145	6.912 – 34.574
p	<0.001	0.036	<0.001	0.038	0.002	0.002	<0.001	0.011	<0.001	0.002	<0.001

FIG. 2. Factors independently associated with in-hospital mortalityin the whole population **(A)**, female subgroup **(B)**, and male subgroup **(C)**. Odds ratios (ORs) with their relative 95% confidence intervals (95% CIs) are shown. CCI, Charlson comorbidity index.

JOURNAL OF WOMEN'S HEALTH
Volume 24, Number 7, 2015

Is Female Gender as Harmful as Bacteria? Analysis of Hospital Admissions for Urinary Tract Infections in Elderly Patients

Fabio Fabbian, MD,[1,*] Alfredo De Giorgi, MD,[1,*] Pablo Jesús López-Soto, PhS,[2] Marco Pala, MD,[1] Ruana Tiseo, MD,[1] Rosario Cultrera, MD,[3] Massimo Gallerani, MD,[4] and Roberto Manfredini, MD[1]

JOURNAL OF WOMEN'S HEALTH
Volume 24, Number 7, 2015

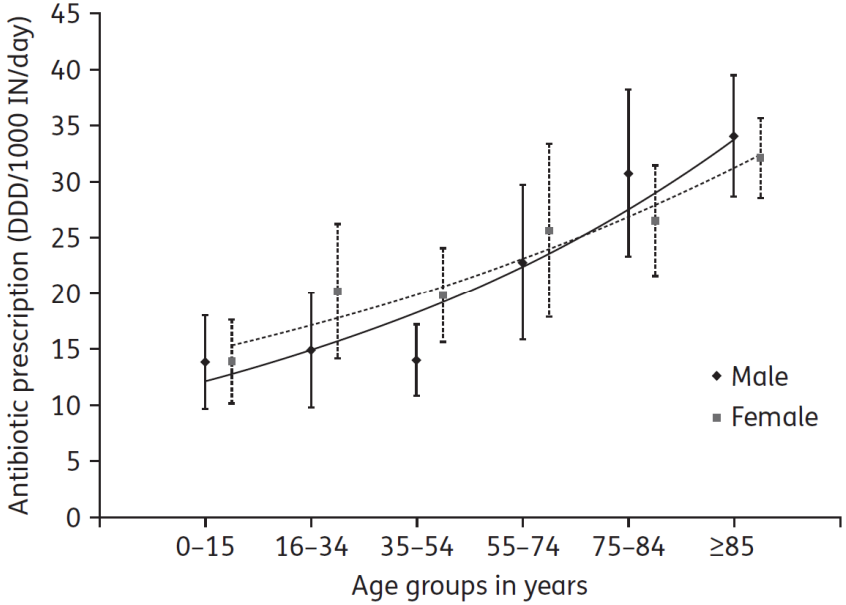
Gender differences in antibiotic prescribing in the community: a systematic review and meta-analysis

Schroder W. Et al. J Antimicrob Chemother 2016

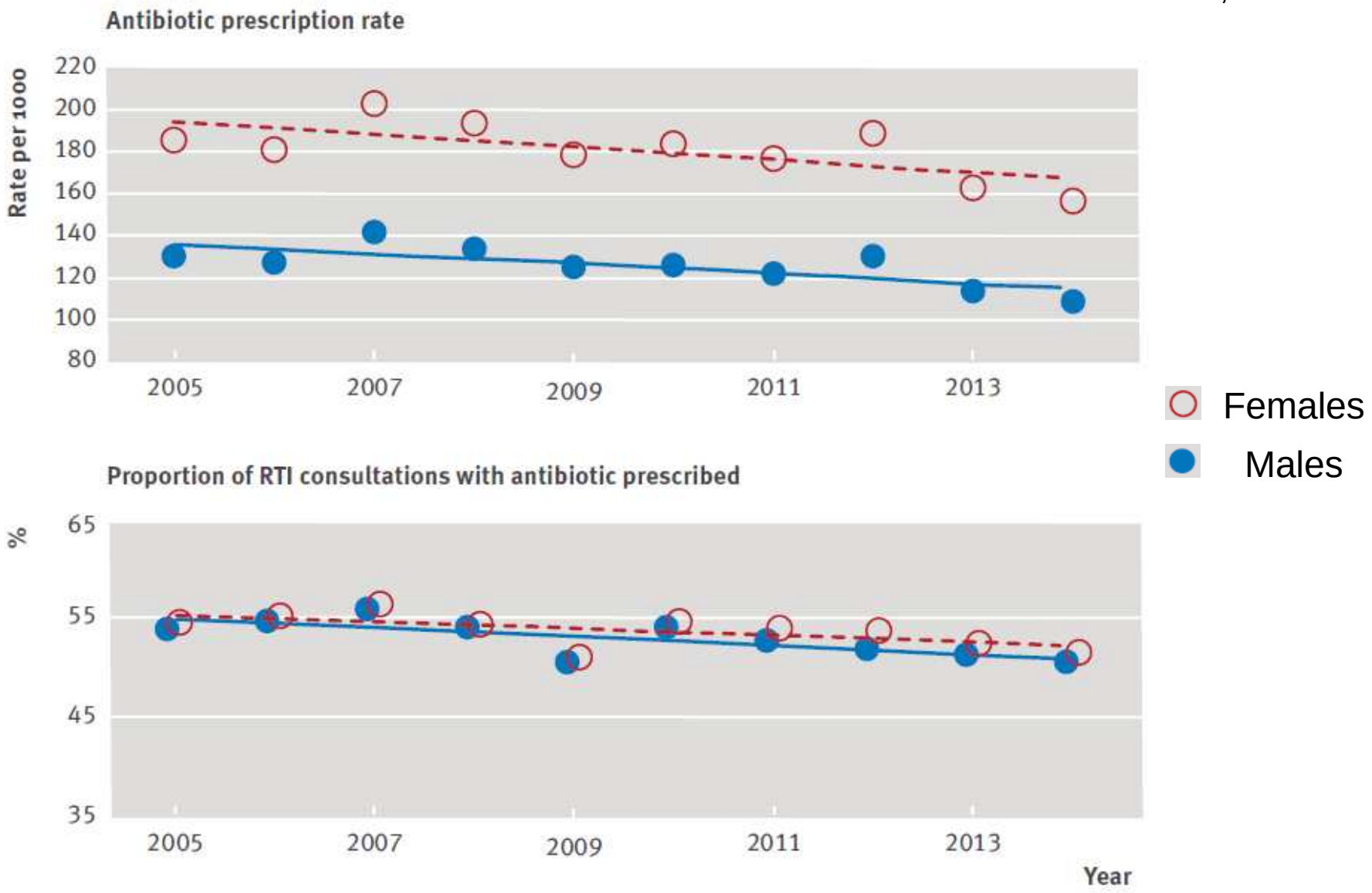
Ricerca su tutti gli studi - pubblicati dal 1976 al 2013 - che hanno analizzato la prescrizione di antibiotici nelle cure primarie (5 nazionali e 6 regionali).

Le donne avevano una probabilità superiore del 27% rispetto agli uomini di ricevere una prescrizione di antibiotici nella loro vita.

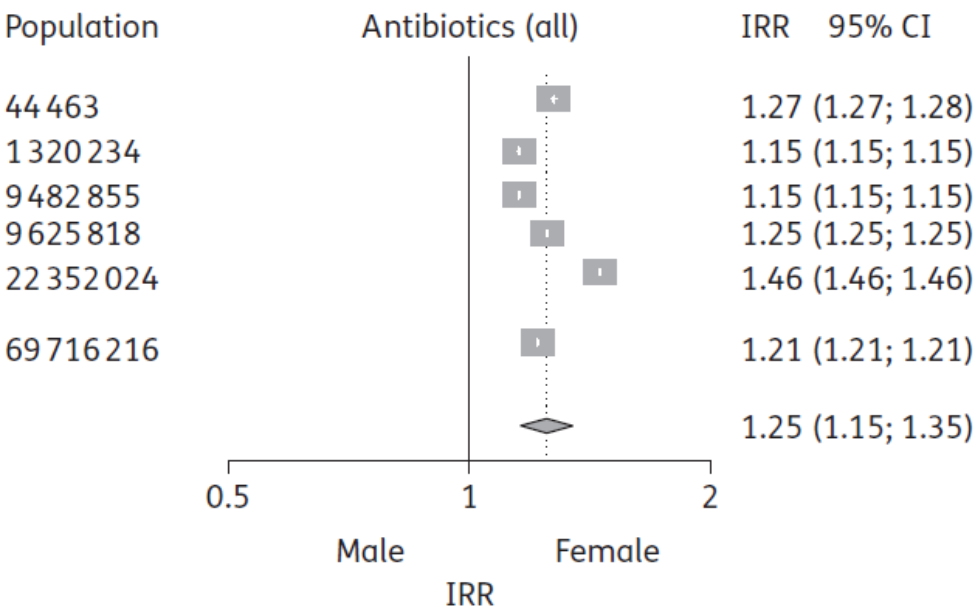
La quantità di antibiotici prescritti alle donne è risultata superiore del 36% rispetto a quella rilasciata agli uomini nella fascia di età dai 16 ai 34 anni e maggiore del 40% dai 35 ai 54 anni. In particolare, la quantità di cefalosporine e macrolidi prescritti per le donne erano più elevate del 44% e del 32% rispetto a quelli prescritti per gli uomini.

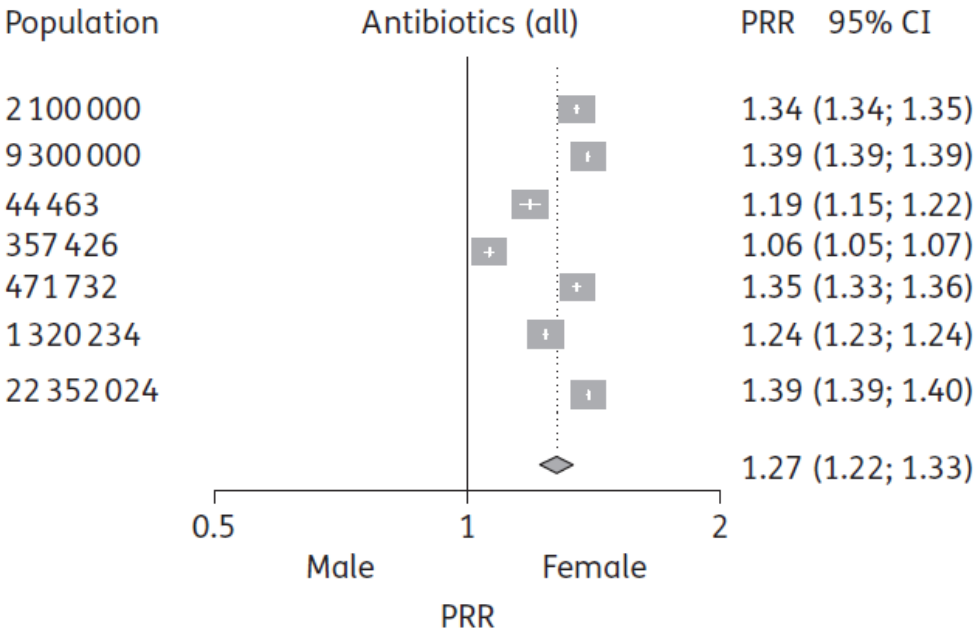


Gulliford MC et al . BMJ 2016;354:i3410



Age standardised consultation rate for self limiting respiratory tract infections (RTI s), antibiotic prescribing rate for RTI s, and proportion of RTI consultations with antibiotics prescribed in 610 general practices contributing to the UK Clinical Practice Research Datalink.





Possibili spiegazioni - quanto meno relative alla realtà italiana - si possono dedurre dalle statistiche che certificano come **le donne si rivolgano più spesso al medico curante, forse sentendo più dei maschi la necessità di dover guarire subito e quindi insistendo maggiormente per ottenere una prescrizione.**

Inoltre, da fonti dell'Istituto superiore di sanità, risulta che **le donne commettano più spesso degli uomini l'errore di trattare con antibiotici una comune patologia virale come l'influenza, favorendo ulteriormente il fenomeno della resistenza batterica agli antibiotici.**

Use of self-medication among adolescents: a systematic review and meta-analysis

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Prevalence of adverse effects (self-reported)

Only one article, of the 15 that met the inclusion criteria, analyzed the issue of adverse effects. Westerlund et al.[17] reported that adverse effects had been experienced by 31.1% of the females and 19.6% of the males using OTCs. In particular, the main issue was therapy failure reported in 46.5% of the girls and 38.1% of the boys.

drugs, which were experienced by 31.1% of the females and 19.6% of the males. **Conclusions:** Self-medication use among adolescents is a widespread phenomenon. It would be advisable to give more attention on this public health concern and to promote initiatives, such as mass media campaigns and governmental actions, in order to make the citizens more aware to the risks related to the consumption of drugs without medical consultation. Further studies on adverse effects are urgently needed.

Eur J Public Health 2016; 25, 3, 444–50

CIPROFLOXACIN RESISTANCE PATTERN AMONG BACTERIA ISOLATED FROM PATIENTS WITH COMMUNITY-ACQUIRED URINARY TRACT INFECTION

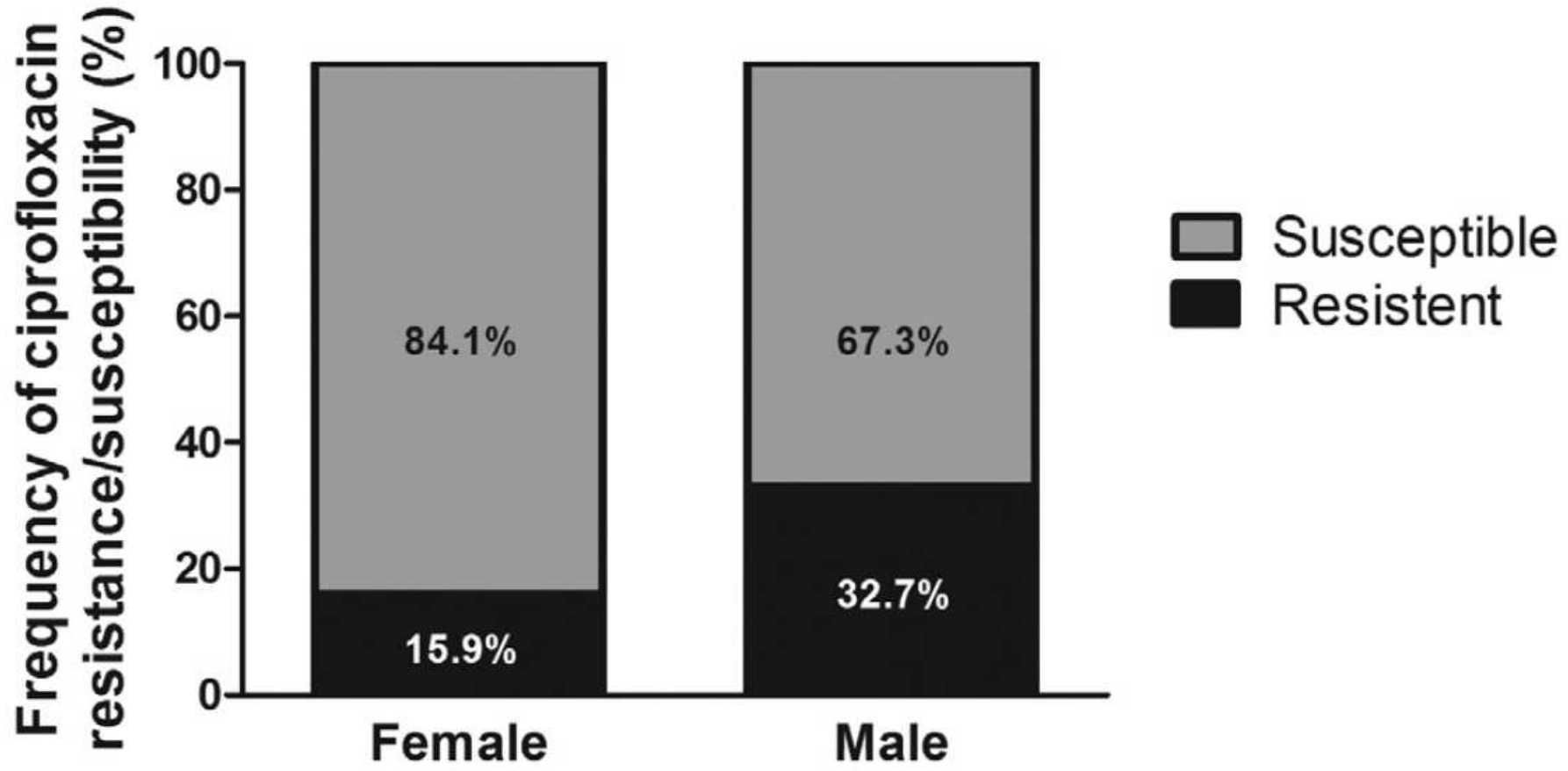

Fig. 3 - Frequency of ciprofloxacin resistance and susceptible bacteria isolated from urine samples of males and females individuals with urinary tract infection ($p < 0.001$; n = 1,641).

HELICOBACTER PYLORI RESISTANCE TO METRONIDAZOLE AND CLARITHROMYCIN IN IRELAND.

O'connor A(1), Taneike I, Nami A, Fitzgerald N, Murphy P, Ryan B, O'connor H, Qasim A, Breslin N, O'moráin C.

Eur J Gastroenterol Hepatol. 2010 Sep;22(9):1123-7.

INTRODUCTION: Helicobacter pylori eradication rates have fallen considerably in recent years. Antibiotic resistance is thought to be rising.

OBJECTIVES: To examine the levels of resistance to metronidazole (MTZ) and clarithromycin (CLA) in H. pylori, isolates were taken in a reference centre in Ireland from 2007 to 2008 and were compared to a similar cohort from a study in 1997.

METHOD: Antimicrobial susceptibilities were tested by E-test. Frequencies of spontaneous m… e an… data we… RI… s an… on th…

MTZ resistance in the treatment-naive cohort was 27.1%. MTZ resistance was more likely to occur in females (35.4 vs. 28.5%) than in males.

A total of 31.5% of the patients had strains resistant to MTZ and 13.2% of the patients were noted to have strains resistant to CLA. About 8.6% of the patients had strains resistant to both the agents. CLA resistance was 9.3% in those who had no prior eradication therapy compared with 32.4% of those who had. CLA resistance increased from 3.9%, among treatment-naive patients in 1997, to 9.3% in our study. MTZ resistance was 29.1% in the treatment-naive population. In 1997, MTZ resistance in the treatment-naive cohort was 27.1%. MTZ resistance was more likely to occur in females (35.4 vs. 28.5%) than in males.

CONCLUSION: This study shows that resistance to CLA among Irish patients infected with H. pylori has increased since 1997. The future of treatment may well lie in the widespread use of sensitivity testing before the treatment. This would promote an accurate treatment.

Enzimi	Differenze uomo -donna
CYP3A4	+ (20-30%) nelle donne
CYP1A2	=
CYP2D6	- nelle donne
CYP2B6	+ nelle donne; poveri metabolizzatori 7% nelle donne e 20% nei maschi
Tiopurina metiltransferasi	+ uomini
Glucuronazione *	+ uomini
Diidropirimidina transferasi	+ uomini
UDP-glucoronosil transferasi *	+ uomini
N-acetiltransferasi	=
Catecol-O-metil transferasi **	+ (25%) uomini

La claritromicina è un inibitore della famiglia delle isoforme del citocromo CYP3A e del trasportatore del P-gp.

La concominate somministrazione di ….. potrebbe determinare importanti rischi per la sicurezza

*è aumentata dai contraccettivi orali, ** metabolizza anche gli estrogeni oltre che le catecolamine inoltre essa è downregolata dagli estrogeni

VACCINI

Studi scientifici relativi a una serie di vaccini (antinfluenzale, varicella, morbillo, febbre gialla) evidenzierebbe che sulle donne i vaccini funzionano meglio, in quanto sembrano garantire una migliore risposta immunitaria dopo la somministrazione, tanto da suggerire la possibilità di usare dosi minori di vaccino nel sesso femminile.

Osterholm MT et al . Lancet Infect Dis. 2012;12(1):36-44.

Problema

44 anni, Impiegato/a, fuma 15 sigarette al di, mai ricoverato in ospedale. Tosse e febbre da 3 giorni. Questa notte vomito e nausea

Altezza 182 cm
Peso 85 Kg, BMI 26,5

Altezza 160 cm
Peso 57 Kg, BMI 23

Siamo sicuri che i percorsi diagnostico terapeutici che abitualmente applichiamo siano corretti?

CONSIDERAZIONI CONCLUSIVE

- Esiste un rischio diverso di infezione nei due sessi
- Cause di tale differenza
- Esiste un diverso rischio di morte per infezione tra sessi

CONSIDERAZIONI CONCLUSIVE

- I fattori che potrebbero spiegare le differenze tra i sessi nelle malattie infettive sono molteplici e comprendono fattori sociali, comportamentali e biologici.
- L'individuazione dei percorsi biologici sottostanti le differenze di sesso nelle manifestazioni di malattie infettive possono non solo consentire una comprensione migliore della patogenesi e patologia, ma anche lo sviluppo di interventi e terapie che prendano in considerazione queste differenze sessuali
- Nuovi approfondimenti sulle differenze di sesso-based possono svolgere un ruolo importante nello sviluppo di trattamenti individualizzati che non solo prendono in considerazione la diversità patogeno e la suscettibilità, ma anche peculiarità legate al sesso.
- E' noto il bias degli uomini inseriti negli studi clinici, pertanto le prove di efficacia nella ricerca di differenze sesso-specifici in particolare per le malattie infettive sono ancora molto critiche.

Grazie dell’attenzione