

Franić Z, Lokobauer N, Marović G. Radiostrontium activity concentrations in milk in the Republic of Croatia for 1961-2001 and dose assessment. Health Phys. 2004;87:160-5.

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Results of systematic measurements of ^{90}Sr activity concentrations in milk for the period 1961-2001 are summarized. An exponential decline of radioactivity followed the moratorium on atmospheric nuclear testing. The highest activity of ^{90}Sr deposited by fallout, $1,060 \text{ Bq m}^{-2}$, was recorded in 1963, while the peak ^{90}Sr activity concentration in milk, $1.42 \pm 0.17 \text{ Bq L}^{-1}$, was recorded in 1964. The values in year 2001 for fallout deposition and milk were 7.7 Bq m^{-2} and $0.07 \pm 0.03 \text{ Bq L}^{-1}$, respectively. The reactor accident at Chernobyl caused higher ^{90}Sr levels only in 1986. ^{90}Sr fallout activity affects milk activity; the coefficient of correlation between ^{90}Sr fallout activity and ^{90}Sr activity concentrations in milk is 0.80. The transfer coefficient from fallout deposition to milk was estimated to be $2.5 \times 10^{-3} \text{ Bq y L}^{-1} \text{ per Bq m}^{-2}$. The dose incurred by milk consumption was estimated for the Croatian population, the annual collective effective dose in 2001 being approximately 2.0 person-Sv.

Gerenčer M, Burek V. Identification of HIV-1 protease cleavage site in human C1-inhibitor. Virus Res. 2004;105:97-100.

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The authors investigated the ability of HIV-1 protease to cleave human complement proteins of the classical complement pathway: C1q, C2 and C4 as well as the regulatory protein, C1-inhibitor. Purified complement proteins were incubated with recombinant HIV-1 protease in vitro and analyzed by SDS-PAGE and immunoblotting assay. The only cleavage site was found in N-terminal region of C1-inhibitor, and it was located between residues Leu-32 and Phe-33 as determined by amino acid sequence analysis of the 85kDa proteolytic fragment after 12 Edman degradation cycles. The HIV-1 protease cleavage sites were not found in C1q, C2 and C4 protein. HIV-1 protease-susceptible site in N-terminal region of C1-inhibitor is very close to the cleavage sites of some other proteases that are able to induce N-terminal proteolysis of the protein.

Stanec Z, Krivić A, Stanec S, Žic R, Budi S. Heel reconstruction with an iliac osteocutaneous free flap: 10-year follow-up. Ann Plast Surg. 2004;53:174-7.

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During the Homeland War in Croatia, many civilians suffered from war wounds of the extremities. Explosive war wounds create composite and devastating injuries mainly by high-energy transfer to the tissue. The authors present an early reconstruction of explosive heel wound with an iliac osteocutaneous free flap with late follow-up result.

Trošić I, Milković-Kraus S. Asbestosis in the Republic of Croatia. Int J Occup Environ Health. 2004;10:198-201.

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Croatians have been exposed to asbestos in the shipbuilding and asbestos-cement industries since 1945. The first cases of asbestosis were reported in 1961; 317 cases were recorded from 1990 to 2000. The Croatian Cancer Registry recorded 248 malignant pleural mesotheliomas between 1991 and 1997, two thirds of which were attributable to occupational exposures to asbestos. The Croatian Asbestosis Patient Association was founded in 1998 to help victims. Croatian law defines the employer's responsibility for work-related health damage and compensation, but average legal proceedings for asbestosis claims take about seven years. Croatian law does not ban the manufacture and import of asbestos. Croatia as a transitional country is subject to socioeconomic pressures. Future approaches to the asbestos issue will depend on revised regulations, which are expected to conform to recommendations of the European Union by 2005.

Marušić M, Božikov J, Katavić V, Hren D, Kljaković-Gašpić M, Marušić A. Authorship in a small medical journal: a study of contributorship statements by corresponding authors. Sci Eng Ethics. 2004;10:493-502.

Croatian Medical Journal, Zagreb University School of Medicine, Zagreb, Croatia.

The authorship criteria of the International Committee of Medical Journal Editors (ICMJE) are widely accepted in biomedical journals, but many studies in large and prestigious journals show that a considerable proportion of authors do not fulfill these criteria. We investigated authorship contributions in a small medical journal outside the scientific mainstream, to see if poor adherence to authorship criteria is common in biomedical journals. We analyzed statements on research contribution, as checked by the corresponding author, for individual authors of 114 research articles, representing 475 authors, submitted to the Croatian Medical Journal (CMJ) from 1999 to 2000. Only 40% of authors fulfilled the ICMJE authorship criteria. The authors listed first on the by-line were more likely to fulfill the authorship criteria than all other authors on the by-line. The percentage of authors fulfilling the ICMJE criteria of authorship decreased with the increase in the number of authors listed on the by-line. These results indicate that poor adherence to ICMJE authorship criteria is poor across biomedical journals, regardless of the size of the scientific community. Authorship and contributorship in biomedical journals, as well as editorial ethical responsibilities towards authorship criteria need critical redefinition and education of both editors and authors.

Škerk V, Krhen I, Lisić M, Begovac J, Roglić S, Škerk V, et al. Comparative randomized pilot study of azithromycin and doxycycline efficacy in the treatment of prostate infection caused by Chlamydia trachomatis. Int J Antimicrob Agents. 2004;24:188-91.

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The study included 125 adult patients (> 18 years of age) who had symptoms of chronic prostatitis and proven presence of

Chlamydia trachomatis. The presence of *C. trachomatis* was confirmed in expressed prostatic secretion or in voided bladder urine collected immediately after prostatic massage by a DNA/RNA hybridization method and/or by isolation on McCoy culture and then by immunofluorescent typing with monoclonal antibodies. The patients were randomized in the ratio 2/1; azithromycin/doxycycline, to receive a total of 4.0 g azithromycin over 4 weeks, given as a single dose of 1 x 1000 mg weekly for 4 weeks or doxycycline 100 mg b.i.d. for 28 days. Patients' sexual partners were treated at the same time. Clinical and bacteriological efficacy was evaluated 4-6 weeks after the end of therapy. In the group of patients with chlamydial infection of the prostate, there was no significant difference between the eradication rates (azithromycin 65/82, doxycycline 33/43; $p=0.82$) and the clinical cure rates (azithromycin 56/82, doxycycline 30/43; $p=0.94$) of the two antimicrobials.

Baršić B, Tambić A, Santini M, Klinar I, Kutleša M, Krajnović V. Antibiotic resistance among nosocomial isolates in a Croatian intensive care unit – results of a twelve-year focal surveillance of nosocomial infections. J Chemother. 2004;16:273-81.

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Continuous 12-year (1990-2001) focal surveillance of the antibiotic resistance among the most common nosocomial pathogens (*Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Acinetobacter* sp., and *Staphylococcus aureus*) in 1325 Intensive Care Unit (ICU) patients was performed. The surveillance period was divided in three 4-year time intervals (1990-1993, 1994-1997, and 1998-2001) and the prevalence of resistance was compared between intervals. Specimens included blood, urine and respiratory tract specimens. The incidence and trends of resistance to six antibiotics showed inconsistent results. Aminoglycoside resistance decreased among *K. pneumoniae* isolates (gentamicin 83%, 72.7%, and 49.6%; amikacin 50.9%, 51.5%, and 18.2%) and *Acinetobacter* sp. strains (amikacin 77%, 63.4%, and 58.2%) but increased in *P. aeruginosa* (amikacin 27.5%, 63.3%, and 44.1%). Overall, resistance to ceftazidime, ciprofloxacin, and imipenem increased but imipenem resistance is still low, particularly among *Acinetobacter* sp. isolates (0, 2.1%, and 1.5%). However, imipenem resistance increased among *P. aeruginosa* (10.2%, 31.6%, and 22.1%). The prevalence of methicillin resistance was high but did not change during the surveillance period (82.3%, 78.3%, and 82.2%). The present study suggests a complex picture of the development of antibiotic resistance in a single ICU. Significant changes occur over time but they are unpredictable and do not show identical tendencies for different species and antibiotics.

Vlahović-Palčevski V, Bergman U. Quality of prescribing for the elderly in Croatia – computerized pharmacy data can be used to screen for potentially inappropriate prescribing. Eur J Clin Pharmacol. 2004;60:217-20.

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The objective of this study was to test whether administrative computerized pharmacy prescription data could be used to assess the prevalence of potentially inappropriate medication use by the elderly in Rijeka, Croatia, using two sets of explicit criteria data. In 2002, the prevalence of potentially inappropriate medication use in the elderly aged 70 years or over was evaluated using Beers' criteria. Inappropriate co-prescribing was evaluated using a list of eight potentially harmful drug combinations. Information on the use of drugs was collected from a computerized pharmacy record of all prescriptions dispensed in the "Jadran Pharmacies" in Rijeka. Five computerized pharmacies dispensed 306,000 (65% of all prescriptions in Rijeka); 78,000 were for those aged 70 years and over. Among these elderly, the prevalence of inappropriate choice of drugs was

2.2% and inadequate co-prescribing 1.9%. The most common inappropriate drug was a long-acting benzodiazepine, diazepam. Mostly used potentially harmful combinations were a non-steroidal anti-inflammatory drug (NSAID) co-prescribed with a diuretic, and two benzodiazepines co-prescribed. In conclusion, the computerized pharmacy data can be used as a screening tool in efforts to improve the quality of drug prescribing in Rijeka. This study also suggests a low rate of potentially inappropriate prescribing for the elderly in Rijeka.

Marušić A, Markotić A, Kovačić N, Muthing J. Expression of glycosphingolipids in lymph nodes of mice lacking TNF receptor 1: biochemical and flow cytometry analysis. Carbohydr Res. 2004;339:77-86.

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The expression of gangliosides and neutral glycosphingolipids (GSLs) in the lymph nodes of mice lacking the gene for the tumour necrosis factor- α receptor p55 (TNFR1) has been investigated. GSL expression in the tissues of mice homozygous (TNFR1^{-/-}) or heterozygous (TNFR1^{+/-}) for the gene deletion was analysed by flow cytometry and high-performance thin-layer chromatography (HPTLC) followed by immunostaining with specific antibodies. HPTLC immunostaining revealed that lymph nodes from TNFR1^{-/-} mice had reduced expression of ganglioside GM1b and GalNAc-GM1b, neolacto-series gangliosides, as well as the globo- (Gb3, Gb4 and Gb5) and ganglio-series (Gg3 and Gg4) neutral GSLs. Flow cytometry of freshly isolated lymph node cells showed no significant differences in GSL expression, except for the GalNAc-GM1b ganglioside, which was less abundant on T lymphocytes from TNFR1^{-/-} lymph nodes. In TNFR1^{-/-} mice, GalNAc-GM1b⁺/CD4⁺ T cells were twofold less abundant (3.8% vs 7.6% in the control mice), whereas GalNAc-GM1b⁺/CD8⁺ T cells were fourfold less abundant (5.0% vs 20.2% in the control mice). This study provides in vivo evidence that TNF signalling via the TNFR1 is important for the activation of GM1b-type ganglioside biosynthetic pathway in CD8 T lymphocytes, suggesting its possible role in the effector T lymphocyte function.

Milojković M, Sijanović S. Assessment of reliability endometrial brush cytology in detection etiology of late postmenopausal bleedings. Arch Gynecol Obstet. 2004;269:259-62.

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The authors evaluated the possibility of discovering bleeding causes in late postmenopausal period with cytological examination of material received by endometrial brush in comparison with Pap test and fractionated curettage. Sixty-two women in late postmenopausal period with cervical canal bleeding were cytological and histological processed. Final diagnosis in 29/62 (46.8%) women with late postmenopausal bleeding was cancer, 25 (40.3%) women had endometrial adenocarcinoma and 4 (6.5%) had squamous endocervical carcinoma. Two women had endometrial precancerous (3.2%). With Pap test accurate diagnosis was set up in 13 from 25 (52.0%) women with endometrial adenocarcinoma and in all of them with squamous endocervical carcinoma. With endometrial brush accurate diagnosis was set up in 14 from 25 (56.0%) women with endometrial adenocarcinoma and in 3 from 4 (75.0%) women with squamous endocervical carcinoma. With fractional curettage the diagnosis of endometrial adenocarcinoma was accurately correct in 21 from 25 (84.0%) women and in all of them with squamous endocervical carcinoma. Cytological examination of material derived with endometrial brush, alike vaginal cytology, is not enough reliable method in our conditions for discovering bleeding causes in late postmenopausal period. Diagnostic exactness of procedure could be increased by histopathological examination of material from endometrial brush procedure and with ultrasound evaluation of endometrium thickness.