Kattalarda uchraydigan shifoxonadan tashqari pnevmoniyaning og'irlik darajani matematik modellash

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Annotatsiya: Hozirgi kunda klinik amaliyotda S. pneumoniae va L. pneumophila serogruxlarni 1 (barcha Legionella infektsiyasining 70% holatlari uchun javobgar) antigenlarini aniqlash uchun testlar mavjud. Ushbu usullar birinchi marta 2007 yilda Amerika toraks jamiyati tomonidan shifoxonadan tashqari pnevmoniyaning mumkin bo'lgan etiologiyasini aniqlash va tegishli etiotropik terapiyani tayinlash uchun skrining vositasi sifatida tavsiya etilgan. Amalga oshirish qulayligi va etarlicha yuqori sezuvchanlik (50-80%) va o'ziga xoslik (90% dan ortiq) ushbu testlardan foydalanish qulayligini tezlik bilan ta'minlaydi. Mamlakatimizda ushbu ekspress diagnostika usullari nisbatan yaqinda ro'yxatga olingan va hozirgacha ulardan foydalanish alohida klinik markazlardan tashqariga chiqmagan. Yaqinda tibbiy yordam bilan bog'liq pnevmoniya (healthcare-associated pneumonia) tobora ko'proq izolyatsiya qilingan. Ushbu turkumda qariyalar uylarida yoki boshqa uzoq muddatli parvarishlash muassasalarida bo'lgan shaxslarda pnevmoniyani o'z ichiga oladi; so'nggi uch oy ichida oldingi antimikrobiyal terapiya tarixi yoki so'nggi 90 kun ichida ikki kundan ortiq kasalxonaga yotqizilganda. Kelib chiqish shartlariga ko'ra, bunday pnevmoniya shifoxona sifatida qaraladi. Biroq, ular patogenlarning tarkibi va ularning antibiotik qarshiligi profilida farq qilishi mumkin. Zamonaviy qo'llanmalar "atipik pnevmoniya" atamasidan uzoqlashishni va "atipik patogenlar oqibatida pnevmoniya" tushunchasini qo'llashni taklif qiladi, chunki shifoxonadan tashqari pnevmoniyaning tabiatini to'liq aniqlash mumkin emas.

Kalit so'zlar: shifoxonadan tashqari pnevmoniya, matematik model, korrelyatsiya, kogort, Fisher testi

Mathematical modeling of the severity of community-acquired pneumonia in adults

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Abstract: Currently, in clinical practice, there are tests to detect antigens of S. pneumoniae and L. pneumophila serogroup 1 (responsible for 70% of all cases of legionella infection). These methods were first recommended by the American Thoracic Society in 2007 as a screening tool to determine the possible etiology of community-acquired pneumonia and prescribe appropriate etiotropic therapy. Ease of implementation and sufficiently high sensitivity (50-80%) and specificity (over 90%) quickly make these tests easy to use. In our country, these express diagnostic methods have been registered relatively recently, and so far their use has not gone beyond individual clinical centers. Recently, healthcare-associated pneumonia has become increasingly isolated. This category includes pneumonia in people in nursing homes or other long-term care facilities; history of previous antimicrobial therapy within the last three months or hospitalization for more than two days in the last 90 days. According to the conditions of occurrence, such pneumonia is considered hospital. However, they can differ in the composition of pathogens and their antibiotic resistance profile. Modern guidelines suggest moving away from the term "SARS" and using the concept of "pneumonia caused by atypical pathogens", since it is impossible to completely determine the nature of pneumonia outside the hospital.

Key words: community-acquired pneumonia, mathematical model, correlation, cohort, Fisher’s test

Aktuallik: Shifoxonadan tashqari pnevmoniyaning klinik ko’rinishi va uni tashxislash usullari haqidagi zamonaviy g’oyalar. Shuni ta’kidlash kerakki, pnevmoniya kasallik yuzaga kelgan sharoitga qarab ikki turga bo’linadi. Bular Shifoxonadan tashqari va nozokomial (shifoxona ichi) pnevmoniya. Immunitet tanqisligi holatlari bo’lgan bemorlarda pnevmoniyani alohida ajratib ko’rsatish kerak. Ushbu yondashuvning to’g’riligi pnevmoniyaning turli sabablari va mikroblarga qarshi kimyoterapiyani tanlashga turli yondashuvlar bilan bog’liq. So’nggi yillarda sog’liqni saqlash bilan bog’liq pnevmoniya tobora ko’proq izolyatsiya qilinmoqda. Ushbu turkumga qariyalar uylarida yoki boshqa uzoq muddatli parvarishlash muassasalarida bo`lgan odamlarda pnevmoniya kuzatiladi; agar so’nggi uch oyda oldingi mikroblarga qarshi terapiya tarixi yoki oxirgi 90 kun ichida ikki kundan ortiq kasalxonaga yotqizilgan bo’lsa. Bunday pnevmoniyalar paydo bo’lish shartlariga ko’ra jamiyat tomonidan olingan deb hisoblanadi. Shu bilan birga, ular patogenlar tarkibida va ularning antibiotiklarga chidamliligi profilida ikkinchisidan farq qilishi mumkin. Zamonaviy qo’llanmalar "atipik pnevmoniya" atamasidan voz kechishni va "atipik patogenlar keltirib chiqaradigan pnevmoniya" tushunchasini qo’llashni taklif qiladi, chunki shifoxonadan tashqari pnevmoniyaning etialogiyasini to’liq tushunish mumkin emas. Odatda kasallikning boshlanishi o’tkir, bazan asta-sekin. Ba’zida O`RVI yoki traxeobronxit pnevmoniya rivojlanishidan oldin bo’ladi.

Pnevmoniyaning klinik ko'rinishi yaxshi o'rganilgan va odatda isitma, febril va subfebril raqamlar, yo'tal, balg'am ishlab chiqarish kabi belgilardan iborat. Nonspesifik klinik ko'rinishlarga umumiy intoksikatsiya sindromi kiradi, uning asosiy belgilari umumiy xolsizlik, adinamiya, bosh og'rig'i, mialgiya, ishtahani pasayishi, ko'ngil aynishi, terlash. Ko'pincha bu sindrom kasallikning og'irligini ko'rsatadi va bemorda yiringli yoki septik asoratlar paydo bo'lganda kuchayadi. Ba'zi bemorlarda titroq, giperhidroz, ko'krak qafasidagi noqulaylik va sezuvchanlik (plevral og'riq), nafas qisilishi olib keladi.

Tadqiqot maqsadi: Shifoxonadan tashqari pnevmoniya bilan og'rigan bemorlarni og'irlik darajani matematik modellash.

Tekshirish usullari: Shifoxonadan tashqari pnevmoniyaning og'irligini baholash uchun matematik modellarni yaratish klinik ko'rinishni aks ettiruvchi 105 ko'rsatkich, shuningdek, tekshirilgan 98 bemorda laboratoriya va instrumental ma'lumotlar natijalari bo'yicha amalga oshirildi. Tekshirilayotganlar kogortasida 18 yoshdan 83 yoshgacha bo'lgan erkaklar 54 (55,1%), ayollar 44 (44,9%). Barcha tekshirilgan bemorlar shifoxonadan tashqari pnevmoniyaning og'irligiga qarab ikki guruhga bo'lingan, ya'ni: engil darajasi - 50 kishi (51%) va og'ir darajasi - 48 kishi (49%). Bemorlarni tarqatishda og'irligiga qarab tekshirib ko'rdik va kattalarga shifoxonadan tashqari pnevmoniyaning oldini olish uchun biz hidoyat qilgan amaliy maslahat, diagnostika, davolash va davolash bo'yicha RROning amaliy tavsiyalariga amal qildik. Shifoxonadan tashqari pnevmoniyaning og'irligini erta tashxislash maqsadida matematik modelni ishlab chiqish uchun zarur shart-sharoitlar ko'rib chiqildi (kasalxonaga yotqizilganidan keyin birinchi kun davomida). Modellarni qurishda biz turli xil alomatlar va sindromlarga tayandik, so'ngra eng muhim ma'lumotlarni tanladik. Ushbu vazifani amalga oshirish uchun diskriminant tahlili qo'llanildi. Har bir xususiyat uchun Fisher mezoni aniqlandi. Olingan raqamli qiymatga asoslanib, har bir xususiyatning miqdoriy hissasi baholandi. F mezoniga ko'ra ahamiyatlilik darajasi $p<0,05$ ga to'g'ri keladigan simptomlar matematik modelga kiritilgan. Laboratoriya ma'lumotlarini to'liq qamrab olish uchun ham oshishini, ham kamayishini-gemogrammaning ko'p yo'nalishli parametrlari ham hisobga olindi. Shifoxonadan tashqari pnevmoniyaning matematik modelining asosini kuchining eng kichik kvadratlarni konstatta va koefftsent usuli bilan aniqlangan tenglamalarning belgilari tashkil etdi. Koeffitsientning belgisi kasallik kodi va tegishli ma'lumot ko'rsatkichi o'rtasidagi bog'liqlik belgisiga mos keldi.

Xulosa: Pulmonologning faoliyati sohasidagi matematik modellashtirish muhim ahamiyatga ega, chunki u bemorning ahvolining og'irligini baholashga ob'ektiv yondashuvni ta'minlaydi, to'g'ri tashxis qo'yish, prognozni aniqlash, adekvat terapiyani buyurish imkonini beradi (Samoilov R.G., 2007). Shuning uchun tadqiqotning keyingi bosqichida bemorlarni kasalxonaga yotqizilgan birinchi kunida

erta tashxis qo'yish uchun pnevmoniya kursining og'irligining matematik modelini ishlab chiqdik. Modelni ishlab chiqishda biz eng muhim kasalliklar xususiyatlarni hisobga oldik. Ushbu vazifani bajarish uchun biz diskriminant tahlilidan foydalandik. Har bir xususiyat uchun Fisher mezoni aniqlandi. Olingan raqamli qiymatga asoslanib, kasallikning har bir belgisining miqdoriy hissasi baholandi. F mezoniga ko'ra ahamiyatlilik darajasi $p<0,05$ ga to'g'ri keladigan simptomlar matematik modelga kiritilgan.

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