

BAB V

KESIMPULAN DAN SARAN

A. Kesimpulan

Berdasarkan penelitian yang dilakukan terhadap pasien fraktur *neck femur* yang dirawat inap di RS Prof. Dr.R. Soeharso Suarakarta bulan Januari-Oktober tahun 2014, dapat disimpulkan:

1. Antibiotik yang digunakan pada penderita pasien fraktur *neck femur* yang dirawat inap di RS Prof. Dr.R. Soeharso Surakarta bulan Januari-Oktober tahun 2014 adalah profilaksis tunggal terdiri dari: cefazolin (93,24%), ceftriaxon (5,41%) dan cefizox (1,35%).
2. Analisis kerasionalan penggunaan antibiotik profilaksis di RS Ortopedi Prof. Dr. R. Soeharso Surakarta pada bulan Januari-Oktober tahun 2014 menggunakan formularium rumah sakit dapat dilihat berdasarkan tepat indikasi sebesar 100%, tepat obat sebesar 100%, dan tepat pasien sebesar 100%. Sedangkan menggunakan *guidelines* dapat dilihat berdasarkan tepat indikasi sebesar 66,67%, tepat obat sebesar 66,67%, tepat dosis sebesar 66,67%, tepat frekuensi sebesar 60 % dan tepat pasien sebesar 66,67%.
3. Obat yang digunakan di dalam penelitian ini sudah sesuai dengan formularium rumah sakit tahun 2014 tetapi kurang sesuai dengan *guideline antibiotic prophylaxis in orthopedic surgery, antibiotic prophylaxis in surgery, antibiotic prophylaxis for surgery guideline* dan *guideline ASHP*.

B. Saran

Saran yang dapat disampaikan berdasarkan hasil penelitian yaitu:

1. Bagi Rumah Sakit

Diperlukan upaya peningkatan kepatuhan bagi tenaga profesi kesehatan di rumah sakit dalam hal kelengkapan pencatatan dalam rekam medik.

2. Bagi penelitian selanjutnya

Dapat dilakukan penelitian di RS Ortopedi Prof. Dr. R Soeharso Surakarta untuk meneliti lebih dalam tentang mikrobiologi pada pasien fraktur *neck femur* atau meneliti antibiotik profilaksis dan terapi untuk pasien fraktur *neck femur*. Pada RS Khusus lain seperti : RS Karima Utama dan RSUI Kustati untuk mendapat gambaran kesesuaian pengobatan pada kasus yang sama.

DAFTAR PUSTAKA

- Aldridge JM, Urbaniak JR. 2007. *Avascular Necrosis of the Femoral Head: Role of Vascularized Bone Grafts*. *Orthop Clin N Am* 38:13–22
- Antibiotic Prophylaxis for Surgery. 2006. *Treatment Guidelines from the Medical Letter*. Vol 4 (Issue 52); 83-88
- [ASHP]. American Society of Health-System Pharmacist. 2013. Clinical Practice Guidelines for Antimicrobial Prophylaxis in Surgery. Dale W. Bratzler, E. Patchen Dellinger, Keith M. Olsen, Trish M. Perl, Paul G. Auwaerter, Maureen K. Bolon, Douglas N. Fish, Lena M. Napolitano, Robert G. Sawyer, Douglas Slain, James P. Steinberg, and Robert A. Weinstein. Editor. <http://www.ajhp.org/content/70/3/195.long>. [20 Nov 2014]
- Bagus CW.2011. Analisis Faktor-Faktor Yang Berhubungan Dengan Status Fungsional Pasien *Open Reduction Internal Fixation* (ORIF) Fraktur Ekstremitas Bawah Di RS. Ortopedi Prof. Soeharso Surakarta [TESIS]. Jakarta :Fakultas Ilmu Keperawatan UI
- Bucholz RW, Heckman JD, Court-Brown CM. 2006. *Rockwood & Green's Fractures in Adults*, 6th Edition. USA: Maryland Composition. p80-331
- Darmojo B, Martono H. 2000. *Geriatrici*. Jakarta: FKUI. Hal 242
- Department of Surgical Education. 2012. *Antibiotic Prophylaxis In Surgery*. The Medical Letter (52):47-52.
- [Depkes RI] Departemen Kesehatan Republik Indonesia 2008. *Sistem Kesehatan Nasional*. Jakarta.
- Dertarani V. 2009. Evaluasi Penggunaan Antibiotik Berdasarkan Kriteria Gyssens di Bagian Ilmu Bedah RSUP DR Kariadi [Karya Tulis Ilmiah]. Semarang: Fakultas Kedokteran UNDIP.
- Dorland WA, Newman. 2010. *Kamus Kedokteran Dorland*. Ed ke-31. Jakarta: EGC
- Evelyn C, Pearce. 2009. *Anatomi dan Fisiologi untuk Paramedis*. Handoyo SY, penerjemah; Kartono M, editor. Jakarta: PT.Gramedia Pustaka Utama. Terjemahan dari: *Anatomy and Physiology for Nurses*. Hal 103
- Farida H. 2005. Kualitas Penggunaan Antibiotik Pada Anak Dengan Demam Pra Dan Pascapelatihan Dokter Tentang Penggunaan Antibiotik Yang Tepat Di Bagian Kesehatan Anak RS Dr. Kariadi Semarang [Skripsi]. Semarang: Fakultas Farmasi: Universitas Diponegoro.

- Gondo, Harry K. 2007. *Penggunaan Antibiotika pada Kehamilan*. Wijaya Kusuma. 1 (1):57-62.
- Gunawan Gan Sulistia, Setiabudy R, Nafrialdi, Elysabeth. 2008. *Farmakologi dan Terapi*. Edisi ke-5 cetak ulang dengan perbaikan 2009. Departemen Farmakologi dan Terapeutik Fakultas Kedokteran Universitas Indonesia, Jakarta. Hal 678, 683.
- Gupta A. 2007. The Management Of Ununited Fractures Of The Femoral Neck Using Internal Fixation And Muscle Pedicle Periosteal Grafting. *J Bone Joint Surg [Br]* ;89-B:148:2-7.
- Gyssens IC, Geerligs IEJ, Nannini-Bergman MG, Knape JTA, Hekster YA, Van der Meer JWM. 1996. *The Timing Of Antimicrobial Prophylaxis In Surgery*. *J Antimicrobial Chemotherapy*. Hal: 60-62.
- Hadi, Usman. 2009. Antibiotic usage and antimicrobial resistance in Indonesia [TESIS]: hal: 155-16
- Helmi ZN. 2011. *Buku Ajar Gangguan Muskuloskeletal*. Jakarta: Salemba Medika. hal: 411-55
- Hydravianto L, Sjarwani A. 2008. Evaluasi Fibular Autostrutgraft Sebagai Terapi Fraktur Collum Femur di Surabaya, Penelitian Retrospektif.
- Iwan D. 1995. *Penggunaan Antibiotik Rasional*. Yogyakarta: Laboratorium Farmakologi UGM. Hal 15-19
- Kalbemed 2013. <http://www.kalbemed.com/News/tabid/229/id/7250/Waktu-Pemberian-Antibiotik-Profilaksis-yang-Tepat.aspx>. Di akses tanggal 8 September 2014.
- Katzung, Bertram G. 1997. *Farmakologi Dasar dan Klinik*. ed.6. Jakarta: Buku Kedokteran EGC.
- Kusaba T. 2009. *Safety and Efficacy of Cefazolin Sodium in the Management of Bacterial Infection and in Surgical Prophylaxis*. *Clinical Medicine: Therapeutics*. Hal:1607–1615
- Leighton RK. 2006. *Fractures of the Neck of the Femur*. Rockwood and Green's Fracture in Adults, 6th edition, Lippincot William and Wilkins, pp 1754-1788
- Minami A, Kasashima T, Iwasaki N, Kato H, Kaneda K. 2000. *Vascularised fibular grafts*. *J Bone Joint Surg [Br]*;82-B:1022-5.
- Nadeak, Ruspina jenita. 2010. Hubungan Dukungan Keluarga dengan Tingkat Kecemasan Pasien Pre Operasi di Ruang RB2 RSUP HAM. <http://repository.usu.ac.id/> [18 September 2010].

- Nagi ON, Dhillon MS, Aggarwal S. 2004. *The Long Term Fate of the Fibula when Used as Intraosseus Graft*. Acta Orthop Belg. 70. 322-326
- Nayagam S. 2010. *Injuries of the Hip and Femur*. Apley's System of Orthopedic and Fractures. Hodder Arnold, London, United Kingdom. pp 843-874
- Neal, Michael J. 2006. *Medical Pharmacology At a Glance*. Edisi 5. Penerbit Erlangga. Hal. 81
- Oloan, S.M, Siahaan., 2009. *Pengantar Anestesi*. Medan: Fakultas Kedokteran UMI / UNPRI
- Ozkurt Z, Erol S, Kadanali A, Ertek M, Ozden K, Tasyaran MA. 2005. Changes in antibiotic use, cost and consumption after an antibiotic restriction policy applied by infectious disease specialists. *Jpn J Infect Dis.*; 58:338-43.
- Pear MS. 2007. *Patient Risk Factors and Best Practices for Surgical Site Infection Prevention*. Managing Infection Control. Workhorse Publishing. 2007: 56-64.
- [QUEBEC] 2005. *Antibiotic Prophylaxis in Orthopedic Surgery*. www.cdm.gouv.qc.ca [18 Oktober 2014].
- Rahardjo R. 2008. *Kumpulan Kuliah Farmakologi*. Edisi 2. Jakarta: ECG hal 23
- Res 2004. *Pharmacology. Canada: Natural Medicine Books*. h. 53.
- Rustiyanto, E, 2010. *Sistem Informasi Manajemen Rumah Sakit yang Terintegrasi*. Bandung. Gosyen publishing. hal 34-36
- Sadikin, ZD. 2011. Penggunaan obat yang rasional. *J Indon Med Assoc*. 61(4): 145-148.
- Saifuddin. 2008. *Pelayanan Kesehatan Maternal Dan Neonatal*. Jakarta : Bina Pustaka.
- Setiabudy R, Mariana Y. 2008. *Farmakologi dan Terapi*. Edisi ke-5. Jakarta: Balai Penerbit FKUI.
- SidhuMS, Mann HS, Tanwar YS, Kumar A, Sidhu GDS. 2010. Fibula - A Bone With Versatile Uses. *Pb Journal of Orthopaedics Vol-XII, No.1*,
- Siregar, J.P.C, Amalia, L, 2003. *Farmasi Rumah Sakit Teori dan Penerapan Jakarta*. EGC hlm 8-32.
- Siswandono, Soekardjo B. 2000. *Kimia Medisinal*. Jilid 2. Surabaya: UNAIR Press, hal: 165-167.

- Sjarwani A. 2008. Fibular Autostrutgraft as the Option of the Femoral Neck Fractures in Surabaya. *Folia Medica Indonesiana* Vol 44 no 3 July-September. hal : 188-195
- Smeltzer, Suzanne C. dan Bare, Brenda G, 2002, Buku Ajar Keperawatan: *Medikal Bedah Brunner dan Suddarth*(Ed.8, Vol. 1,2), Alih bahasa oleh Agung Waluyo (dkk), EGC, Jakarta.
- Stannard JT, Volgas DA, McGwin III G, Stewart RL, Obremskey W, Moore T, Anglen JO. 2008. *Lower Extremity and Pelvis Trauma in Miller's Review of Orthopedic*. 5th edition. Saunders Elsevier, Philadelphia, USA. Hal. 601-634
- Stringer, Jensen L. 2011. Basic Concepts in Pharmacology: *Student's Survival Guide*. Edisi 3. (diterjemahkan oleh: dr. Huriawati Hartanto). Jakarta: Buku Kedokteran EGC. hal. 186 – 199.
- Sugiyono. 2008. *Metode Penelitian kuantitatif dan kuantitatif*. Bandung: CV. Alfabeta Bandung.
- Susetyowati. 2010. Status Gizi Pasien Bedah Mayor Preoperasi Berpengaruh Terhadap Penyembuhan Luka Dan Lama Rawap Inap Pascaoperasi Di RSUP. Dr. Sarjito Yogyakarta. *Jurnal Gizi Klinik Indonesia*. Vol. 7, No. 1 Juli 2010: 1-7
- Waluyo, L. 2004. *Mikrobiologi Umum*. Penerbit Universitas Muhamadiyah Press, Malang
- [WHO] 2006, *WHO Collaborating Centre For Drug Statistik Methodology*, Norwegian Institute of Public Health Oslo
- Zahid M, Sabir A, Asif N, Julfiqar M, Khan AQ, Ahmad S, Siddiqui YS. Fixation using cannulated screws and fibular strut grafts for fresh femoral neck fractures with posterior comminution. *Journal of Orthopaedic Surgery* 2012;20(2):191-5

Lampiran 1. Surat permohonan melaksanakan penelitian



Nomor : 979/A10 – 4/08.11.2014
Hal : Penelitian tugas akhir

Surakarta, 08 Nopember 2014

Kepada Yth.
Direktur
RS Ortopedi Prof. Dr. Suharso
Jl. A. Yani Pabelan
SURAKARTA

Dengan hormat,

Berkaitan dengan penelitian mahasiswa dalam rangka penyusunan tugas akhir (Skripsi) bagi mahasiswa Program Studi S1 Farmasi Fakultas Farmasi Universitas Setia Budi, maka dengan ini kami mengajukan permohonan izin untuk melakukan survei dan pengambilan data penelitian, dengan prosedur dan biaya sesuai kebijakan yang ada bagi mahasiswa kami :

| NO | NAMA | NIM |
|----|----------------------|------------|
| 1 | Granadha Normahendra | 17113236 A |

Besar harapan kami atas terkabulnya permohonan ini yang tentunya akan berguna bagi pembangunan nusa dan bangsa khususnya kemajuan dibidang pendidikan.

Demikian atas kerja samanya disampaikan banyak terima kasih.



Prof. Dr. R.A. Oetari, SU., MM., M.Sc., Apt.



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Lampiran 2. Surat keterangan telah melaksanakan penelitian

| | | |
|--|--|---|
|  | <p>KEMENTERIAN KESEHATAN RI DIREKTORAT JENDERAL BINA UPAYA KESEHATAN RUMAH SAKIT ORTOPEDI PROF.DR.R. SOEHARSO SURAKARTA PUSAT RUJUKAN NASIONAL</p> <p>Jl. Jend. A.Yani, Pabelan, Surakarta 57162, Telepon : (0271) 714458, Fax : (0271) 714058 Email : rso_solo@rso.go.id website : www.rso.go.id</p> |  |
| <h3 style="margin: 0;">SURAT KETERANGAN</h3> <p style="margin: 0;">Nomor : DM.03.02 / II.3.2 / 02212 / 2015</p> | | |
| <p>Yang bertanda tangan di bawah ini Direktur Umum, SDM dan Pendidikan Rumah Sakit Ortopedi Prof. Dr. R. Soeharso Surakarta menerangkan bahwa :</p> | | |
| Nama | : | Granadha Normahendra |
| Tempat, Tanggal Lahir | : | Madiun, 18 Mei 1993 |
| NIS | : | 17113236 A |
| Institusi | : | S1 Farmasi Universitas Setia Budi |
| <p>Telah melaksanakan Penelitian di Rumah Sakit Ortopedi Prof. Dr. R. Soeharso Surakarta, periode bulan Desember 2014 – Januari 2015 dalam rangka penyusunan Skripsi dengan judul :</p> | | |
| <p>Analisis Penggunaan Antibiotik Profilaksis Pada Pasien Bedah Fraktur Neck Femur Di Instalasi Rawat Inap di Rumah Sakit Ortopedi Prof. Dr. R. Soeharso Surakarta Pada Bulan Januari – Oktober 2014.</p> | | |
| <p>Demikian surat keterangan dibuat, untuk dapat dipergunakan sebagaimana mestinya.</p> | | |
| <div style="display: flex; align-items: center;">  <p>Surakarta, 17 April 2015 Direktur Umum, SDM dan Pendidikan Dra. Nining Setyawati, M.Si NIP. 195002201987032001</p> </div> | | |

Lampiran 3. Guideline Antibiotic Prophylaxis in Orthopedic Surgery

| ADULTS | | ANTIBIOTIC PROPHYLAXIS* | | | | |
|---|---------------------------------|---|----------------------------|-------------------------------------|-----------------------------|----------------------------|
| PROPHYLAXIS NOT RECOMMENDED FOR ORTHOPEDIC PROCEDURES WITHOUT IMPLANTATION OF FIXATION DEVICES | | | | | | |
| Type of surgery | First-line therapy | | | Second-line therapy | | |
| | Antibiotic | Dosage | Cost per dose [‡] | Antibiotic | Dosage | Cost per dose [‡] |
| Orthopedic procedures with implantation of internal fixation devices (prosthesis, nail, plate, screw, wire) | Cefazolin (Ancef [®]) | 1 g IV at induction [†] ----- patient > 80 kg: 2 g IV at induction [†] ----- Repeat dose during procedure if it lasts > 3 hours or if blood loss exceeds 1500 mL | \$1 | Vancomycin (Vancocin [®]) | 1 g IV infusion over 60 min | \$7 |

* Only one brand name product is listed although several manufacturers may market other brand names.

† Two additional doses of 1 g IV every 8 hours may be required.

‡ Approximate cost negotiated for the healthcare facilities of the region of Québec (June 2005). Cost may vary with the region.

Characteristics of pediatric antibiotic prophylaxis

- Few studies have evaluated the efficacy of antibiotic prophylaxis in children undergoing orthopedic surgery.
- Recommendations are based on adult population trials and may be adapted to local experience.

| CHILDREN | | ANTIBIOTIC PROPHYLAXIS* | | | | |
|---|---------------------------------|---|----------------------------|-------------------------------------|---|----------------------------|
| PROPHYLAXIS NOT RECOMMENDED FOR ORTHOPEDIC PROCEDURES WITHOUT IMPLANTATION OF FIXATION DEVICES | | | | | | |
| Type of surgery | First-line therapy | | | Second-line therapy | | |
| | Antibiotic | Dosage | Cost per dose [§] | Antibiotic | Dosage | Cost per dose [§] |
| Orthopedic procedures with implantation of internal fixation devices (prosthesis, nail, plate, screw, wire) | Cefazolin (Ancef [®]) | 25 mg/kg IV at induction [†] Dose range: 20-30 mg/kg Maximal dose: 1 g | \$1 | Vancomycin (Vancocin [®]) | 10 mg/kg IV infusion over 60 min Maximal dose: 1 g | \$1 |

* Only one brand name product is listed although several manufacturers may market other brand names.

† Two additional doses of 25 mg/kg IV every 8 hours may be required.

‡ Approximate cost negotiated for the healthcare facilities of the region of Québec (June 2005). Cost may vary with the region.

§ Approximate cost for lowest dosage in a 20 kg-child.

Lampiran 4. Antibiotic Prophylaxis In Surgery

| Procedure | Likely Pathogens | Recommended Antibiotic* | Penicillin Allergy ^{4,5} | Recommended Duration |
|---|--|---|---|---|
| Cardiothoracic Surgery | <i>Staph epi, Staph aureus, Streptococcus, Corynebacteria, enteric-Gram-negative bacilli</i> | Cefazolin 1g | Clindamycin 600mg | 48 hours |
| General Surgery | | | | |
| • Appendectomy (non-perforated) | Enteric Gram(-) bacilli | Cefoxitin 1g OR Cefotetan 1g | Clindamycin 600mg + Gentamicin 2mg/kg OR Cefazolin 1g + Metronidazole 500mg | Single dose |
| • Colorectal surgery | Enteric Gram(-) bacilli, Enterococcus, anaerobes | Cefoxitin 1g OR Cefotetan 1g | Clindamycin 600mg + Gentamicin 2mg/kg OR Cefazolin 1g + Metronidazole 500mg | Single dose |
| • High-risk ⁶ esophageal, gastro-duodenal or biliary surgery | Enteric Gram(-) bacilli, Gram(+) cocci | Cefazolin 1g | Clindamycin 600 mg + Gentamicin 2mg/kg OR Cefazolin 1g + Metronidazole 500mg | Single dose |
| • Penetrating abdominal trauma | Enteric Gram(-) bacilli, Enterococcus, anaerobes | Cefoxitin 1g OR Cefotetan 1g | Clindamycin 600mg + Gentamicin 2mg/kg OR Cefazolin 1g + Metronidazole 500mg | 24 hours |
| Gynecologic Surgery | | | | |
| • C-section | <i>Staph epi, Staph aureus, Group B Strep, Enterococcus</i> | Cefazolin 2g | Clindamycin 900mg + Gentamicin 2mg/kg | Single dose |
| • Hysterectomy | Enteric Gram(-) bacilli, Group B Strep, Enterococcus | Cefazolin 1g | Clindamycin 600mg + Gentamicin 2mg/kg | Single dose |
| Head & Neck Surgery | Anaerobes, <i>Staph aureus, Gram(-) bacilli</i> | Clindamycin 600mg OR Ampicillin/subtactam 3g | Clindamycin 600mg | 24 hours |
| Neurosurgery | | | | |
| • Clean | <i>Staph aureus, Staph epi</i> | Cefazolin 1g | Clindamycin 600mg | Single dose |
| • Skull fracture, CSF leak | Anaerobes, <i>Staph epi, Staph aureus</i> | Cefazolin 1g | Clindamycin 600mg | Single dose |
| • Penetrating trauma | <i>Staph, Strep, Gram(-) bacilli, anaerobes</i> | Cefoxitin 1g OR Cefotetan 1g | Clindamycin 600mg | 5 days |
| • Spine | <i>Staph aureus, Staph epi</i> | Cefazolin 1g | Clindamycin 600mg | Single dose |
| Orthopedic Surgery | | | | |
| • Closed fractures | <i>Staph epi, Staph aureus</i> | Cefazolin 1g | Clindamycin 600mg | Single dose |
| • Open fractures | <i>Staph, Strep, Gram(-) bacilli, anaerobes</i> | Cefazolin 1g ± Gentamicin 2mg/kg ⁷ | Clindamycin 600mg + Gentamicin 2mg/kg | Grade I/II – 24 hours* Grade III – 48 hours* |
| Urologic Surgery | | | | |
| • Genitourinary (high risk only) ⁷ | Gram(-) bacilli, Enterococcus | Cefazolin 1g | Ciprofloxacin 400mg | Single dose |
| Vascular Surgery | <i>Staph epi, Staph aureus, Gram(-) bacilli, Enterococcus</i> | Cefazolin 1g | Clindamycin 600mg | 24 hours |

Lampiran 5. Antibiotic Prophylaxis For Surgery Guideline

| PROCEDURE | COMMON PATHOGENS | RECOMMENDED ANTIBIOTIC PROPHYLAXIS | POST OPERATIVE DURATION |
|--|---|---|---|
| CARDIAC Heart surgery ⁺ , PDA (patent ductus arteriosis), ASD/VSD (atrial/ventricular septal defect), Glenn Shunt, valve replair/replacement, Aortic reconstruction, prosthetic graft insertion | <i>S. epidermidis</i> , <i>S. aureus</i> | Cefazolin OR Vancomycin for known MRSA or high risk for MRSA, or major reaction to beta-lactams ⁺⁺ | Discontinue within 48-72 hrs of surgical end time |
| GASTROINTESTINAL Esophageal, gastroduodenal PEG placement/revision/ conversion to other feeding tubes OR high-risk conditions | Enteric gram-negative bacilli, gram positive cocci | For high risk ⁺⁺⁺ : Cefazolin If major reaction to beta-lactams ⁺⁺ : Clindamycin plus Gentamicin | Discontinue within 24 hrs of surgical end time |
| Biliary, including lap cholecystectomy | Enteric gram-negative bacilli, gram positive cocci, clostridia | For high risk [*] : Cefazolin If major reaction to beta-lactam ⁺⁺ : Clindamycin plus Gentamicin | |
| Colorectal** Appendectomy or ruptured viscus | Enteric gram negative bacilli, anaerobes, enterococci | Cefoxitin OR Ampicillin/sulbactam OR Cefazolin plus Metronidazole If major reaction to beta-lactams ⁺⁺ : Clindamycin plus Gentamicin | |
| HEAD and NECK SURGERY Incision through oral or pharyngeal mucosa, lower jaw fraction, removal of esophagus pouch | Anaerobes, enteric gram-negative bacilli, <i>S. aureus</i> | Cefazolin OR If major reaction to beta-lactams ⁺⁺ : Clindamycin plus Gentamicin | Discontinue within 24 hrs of surgical end time |
| NEUROSURGERY## Craniotomy, shunt placement/revision, insertion of pump/reservoir, spinal procedure (laminectomy, fusion or cord decompression) | <i>S. aureus</i> , <i>S. epidermidis</i> | Cefazolin OR Vancomycin for known MRSA or high risk for MRSA, or major reaction to beta-lactams ⁺⁺ | Discontinue within 24 hrs of surgical end time |
| ORTHOPEDIC Spinal procedures or implantation of hardware If tourniquet is used, give antibiotic before tourniquet inflation | <i>S. epidermidis</i> , <i>S. aureus</i> | Cefazolin or Cefepime and Vancomycin for known MRSA or high risk for MRSA, or major reaction to beta-lactams ⁺⁺ | Discontinue within 24 hrs of surgical end time |
| THORACIC Lung resection, VATS | <i>S. aureus</i> , <i>S. epidermidis</i> , streptococci, enteric gram-negative bacilli ^{##} | Cefazolin OR Vancomycin or Clindamycin for known MRSA or high risk for MRSA, or major reaction to beta-lactams ⁺⁺ | Discontinue within 24 hrs of surgical end time |
| VASCULAR (see Cardiac) Extremity amputation for ischemia, vascular access for hemodialysis | <i>S. aureus</i> , <i>S. epidermidis</i> , enteric gram-negative bacilli [*] | Cefazolin OR Vancomycin OR Clindamycin for known MRSA or high risk for MRSA, or major reaction to beta-lactams ⁺⁺ | Discontinue within 24 hrs of surgical end time |
| GYNECOLOGIC | Enteric gram-negative bacilli, anaerobes, Gp B strep, enterococci | Cefoxitin OR Ampicillin plus Metronidazole plus Gentamicin If major reaction to beta-lactam ⁺⁺ : Clindamycin plus Gentamicin | Discontinue within 24 hrs of surgical end time |
| GENITOURINARY Bladder augmentation, pyeloplasty | Enteric gram-negative bacilli, anaerobes, enterococci | For high risk only ⁺⁺⁺ : Cefazolin OR Cefoxitin OR Ampicillin plus Metronidazole plus Gentamicin If major reaction to beta-lactam ⁺⁺ : Clindamycin plus Gentamicin | Discontinue within 24 hrs of surgical end time |

| ANTIBIOTIC AGENT | PEDIATRIC INTRAVENOUS DOSE (ADULT DOSE) | INFUSION TIME (MINUTES) | TIMING OF FIRST DOSE | INTRAOPERATIVE REDOSING FOR NORMAL RENAL FUNCTION |
|----------------------|--|-------------------------|--------------------------------------|---|
| Ampicillin/Sulbactam | 50 mg/kg (1.5 - 3 gm) | 30 | Begin 60 min or less before incision | Every 3 hrs |
| Cefazolin | 25 mg/kg (max 1 gm; if greater than 80 kg, use 2 gm) | 30 | Begin 60 min or less before incision | Every 4 hrs |
| Cefoxitin | 40 mg/kg (1-2 gm) | 30 | Begin 60 min or less before incision | Every 3 hrs |
| Cefepime | 50mg/kg (1-2 gm) | 30 | Begin 60 min or less before incision | Every 4 hrs |
| Clindamycin | 10 mg/kg (600-900 mg) | 30 | Begin 60 min or less before incision | Every 6 hrs |
| Gentamicin | 2.5 mg/kg (120 mg if > 80 kg) | 30 | Begin 60 min or less before incision | Every 8 hrs |
| Metronidazole | 10 mg/kg (500 mg) | 30 | Begin 60 min or less before incision | Every 6 hrs |
| Vancomycin | 15 mg/kg (1 gm if > 50 kg) | 60 | Begin 60 to 120 min before incision | Every 12 hrs |

Lampiran 6. Guidelines ASHP

584 ASHP Therapeutic Guidelines

Table 1.

Recommended Doses and Redosing Intervals for Commonly Used Antimicrobials for Surgical Prophylaxis

| Antimicrobial | Recommended Dose | | Half-life in Adults With Normal Renal Function, hr ¹⁹ | Recommended Redosing Interval (From Initiation of Preoperative Dose), hr ² |
|--|--|---|---|---|
| | Adults ^a | Pediatrics ^b | | |
| Ampicillin-sulbactam | 3 q (ampicillin 2 g/ sulbactam 1 g) | 50 mg/kg of the ampicillin component | 0.8–1.3 | 2 |
| Ampicillin | 2 g | 50 mg/kg | 1–1.9 | 2 |
| Aztreonam | 2 g | 30 mg/kg | 1.3–2.4 | 4 |
| Cefazolin | 2 g, 3 g for pts weighing >120 kg | 30 mg/kg | 1.2–2.2 | 4 |
| Cefuroxime | 1.5 g | 50 mg/kg | 1–2 | 4 |
| Cefotaxime | 1 g ^d | 50 mg/kg | 0.9–1.7 | 3 |
| Cefoxitin | 2 g | 40 mg/kg | 0.7–1.1 | 2 |
| Cefotetan | 2 g | 40 mg/kg | 2.8–4.6 | 6 |
| Ceftriaxone | 2 g ^e | 50–75 mg/kg | 5.4–10.9 | NA |
| Ciprofloxacin ^f | 400 mg | 10 mg/kg | 3–7 | NA |
| Clindamycin | 900 mg | 10 mg/kg | 2–4 | 6 |
| Ertapenem | 1 g | 15 mg/kg | 3–5 | NA |
| Fluconazole | 400 mg | 6 mg/kg | 30 | NA |
| Gentamicin ^g | 5 mg/kg based on dosing weight (single dose) | 2.5 mg/kg based on dosing weight | 2–3 | NA |
| Levofloxacin ^f | 500 mg | 10 mg/kg | 6–8 | NA |
| Metronidazole | 500 mg | 15 mg/kg Neonates weighing <1200 g should receive a single 7.5- mg/kg dose | 6–8 | NA |
| Moxifloxacin ^f | 400 mg | 10 mg/kg | 8–15 | NA |
| Piperacillin-tazobactam | 3.375 g | Infants 2–9 mo: 80 mg/ kg of the piperacillin component Children >9 mo and ≤40 kg: 100 mg/kg of the piperacillin component | 0.7–1.2 | 2 |
| Vancomycin | 15 mg/kg | 15 mg/kg | 4–8 | NA |
| <i>Oral antibiotics for colorectal surgery prophylaxis (used in conjunction with a mechanical bowel preparation)</i> | | | | |
| Erythromycin base | 1 g | 20 mg/kg | 0.8–3 | NA |
| Metronidazole | 1 g | 15 mg/kg | 6–10 | NA |
| Neomycin | 1 g | 15 mg/kg | 2–3 (3% absorbed under normal gastrointestinal conditions) | NA |

^aAdult doses are obtained from the studies cited in each section. When doses differed between studies, expert opinion used the most-often recommended dose.

^bThe maximum pediatric dose should not exceed the usual adult dose.

^cFor antimicrobials with a short half-life (e.g., cefazolin, cefoxitin) used before long procedures, redosing in the operating room is recommended at an interval of approximately two times the half-life of the agent in patients with normal renal function. Recommended redosing intervals marked as “not applicable” (NA) are based on typical case length; for unusually long procedures, redosing may be needed.

^dAlthough FDA-approved package insert labeling indicates 1 g, 14 experts recommend 2 g for obese patients.

^eWhen used as a single dose in combination with metronidazole for colorectal procedures.

^fWhile fluoroquinolones have been associated with an increased risk of tendinitis/tendon rupture in all ages, use of these agents for single-dose prophylaxis is generally safe.

^gIn general, gentamicin for surgical antibiotic prophylaxis should be limited to a single dose given preoperatively. Dosing is based on the patient's actual body weight. If the patient's actual weight is more than 20% above ideal body weight (IBW), the dosing weight (DW) can be determined as follows: DW = IBW + 0.4(actual weight – IBW).

Lampiran 7. FRS Ortopedi Prof. Dr. R. Soeharso Surakarta 2014.

| NO KELAS TERAPI | NO URUT OBAT | KELAS TERAPI, NAMA OBAT, BENTUK SEDIAAN, KEKUATAN | NAMA GENERIK, NAMA DAGANG | |
|-----------------|--------------|--|---|---|
| 2 | 2.2 | OBAT untuk ANAFILAKSIS Epinephrine (Adrenalin) Inj. IV, 0,1% | 1. Adrenalin bitartras | |
| | 3.1 | ANTI INFEKSI ANTI BAKTERI Golongan Penisilin | 1. Penproc (PP-6) | |
| | | | | 3.1.1.1 |
| | 3.1.1.2 | Amoxycilin, 250 mg, 500 mg, Syr 125 mg/5 ml | 2. Amoksisilin | |
| | 3.1.2 | Penicilin tahan enzim penicillinase | 1. Co-Amoxyclav 2. Palentin 3. Inciclav | |
| | 3.1.2.1 | Kombinasi Amoxicilin 250 / 500 mg dg Asam clavulanat 125 / mg Tab, syrup | | |
| | | | | |
| | 3 | 3.1.3 | Sefalosporin dan Antibiotika golongan betalaktam lainnya | 1 Cefazolin 2 Cefazol 3 Evalin 1 Dynacef 2 Velodine 1 Sefadroksil 2 Droxefa 3 Tisacef 1 Situroxime 1 Cefbut 2 Cefepan 3 Infix 4 Mucef |
| | | 3.1.3.1 | Generasi I Cefazolin Na Via 1 gr Inj | |
| | | 3.1.3.2 | Cephadrine Vial, 1 gr Inj, Tab 500 mg | |
| 3.1.3.3 | | Cefadroxil, Kaplet 250, 500 mg, syrup | | |
| 3.1.2.2 | | Generasi II | | |
| 3.1.2.2.1 | | Cefuroxime, Kaplet 250, 500 mg, Vial 750 mg 1 g | | |
| 3.1.2.3 | | Generasi III | | |
| 3.1.2.3.1 | | Cefixime Kapsul 100 mg, Syrup 100 mg / 5 ml | | |

| NO KELAS TERAPI | NO URUT OBAT | KELAS TERAPI, NAMA OBAT, BENTUK SEDIAAN, KEKUATAN | NAMA GENERIK, NAMA DAGANG | |
|-----------------|--------------|---|--|--|
| 3 | 3.1.2.3.2 | Cefotaxime Vial 1 g Inj | 1 Cefotaxime 2 Biocef 3 Taxef 4 Fobet | |
| | 3.1.2.3.3 | Ceftriaxon Vial 1 gr Inj | 1 Ceftriaxon 2 Incephin 3 Ceftrimax 4 Cephalfox | |
| | 3.1.2.3.4 | Cefoperazon vial 1 g Inj | 1 Cerozon | |
| | 3.1.2.3.5 | Cefizoksim | 1 Cefizox | |
| | 3.1.2.3.6 | Cefclorfen pivoksil | 1 Melact | |
| | 3.1.3 | Golongan Aminoglikosida | 1 Mikacin | |
| | 3.1.3.1 | Amikacin Sulfat Vial 250, 500 Inj | | |
| | 3.1.3.2 | Netilmicin sulfat, 100 & 200 Inj | | 1 Hypobac |
| | 3 | 3.1.3.3 | Gentamycin 40 mg, 80 mg Inj | 1 Gentamycin |
| | | 3.1.3.4 | Dibecacin inj | 1 Dibekacin |
| 3.1.4 | | Golongan Quinolon | 1 Ciprofloxacin 2 Phaproxin 3 Cifos 4 Ciproxin XR 1 Scanax 750 | |
| 3.1.4.1 | | Ciprofloxacin, Tab 500 mg, Infus | | |
| | | Ciprofloxacin 750 | | |
| 3.1.4.2 | | Levofloxacin tab, infus | | 1 Levofloxacin 2 Cravit 3 Cravox |
| 3.1.4.3 | | Ofoxacin 200 mg, 400 mg | 1 Ofloxacin | |
| 3.1.5 | | Antibiotika Lain | 1 Fosmycin | |
| 3.1.5.1 | | Fosmycin Na Inj 1 gr, 2 gr | | |

| NO KELAS TERAPI | NO URUT OBAT | KELAS TERAPI, NAMA OBAT, BENTUK SEDIAAN, KEKUATAN | NAMA GENERIK, NAMA DAGANG | |
|-----------------|------------------------|--|---|-----------------------------------|
| 3 | 3.1.5.2 | Clindamycin 300 mg tab | 1 Clindamycin 2 Dacin 300 3 Clinos 300 | |
| | 3.1.5.3 | Meropenem Inj 0,5 gr dan 1 gr | 1 Merofen | |
| | 3.1.5.4 | Metronidazole tab | 1 Metronidazole 2 Dimedazol 3 Diazol | |
| | 3.1.5.5 | Tetrasikin 500 mg | 1 Tetrasikin 2 Teitin | |
| | 3.1.7 | Anti tuberkolosis | 1 Ethambutol 2 Sanitibi 3 Erabutol Plus | |
| | 3.1.7.1 | Ethambutol, Tab 250, 500 mg | | |
| | 3.1.7.2 | Isoniazide, Tab 100, 300 mg | | |
| | 3.1.7.3 | Rifampicin Tab 300 mg, 450, 600 mg | 1 Rifampicin | |
| | 4 | 3.1.7.4 | Pyrazinamide, Tab 500 mg | 1 Pyrazinamid |
| | | 3.1.7.5 | Streptomycin sulfat, Serb. Inj. 1500 mg/vial | 1 Streptomycin |
| 3.1.7.6 | | Rifampicin 150 mg,INH 75 mg,Pyrazinamid 400 Etambutol 275mg | 1 Rifastar | |
| 3.1.7.7 | | Rifampicin 150 mg,INH 150 mg | 1 Pro TB 2 Rifan H | |
| 3.1.8 | | Topikal | 1 Nebacetin Pwdr | |
| 3.1.8.1 | | Kombinasi Neomycin sulfat 5 mg + Bacitracin 250 ul | | |
| 4 | | 4.1 | RELAKSAN OTOT PERIFER Epeiron HCl, Tab 50 mg | 1 Fores 2 Forelax 3 Rizonax |
| 4.2 | Tizanidine tablet 2 mg | 1 Myores 2 Sirdalut | | |
| 4.3 | Baclofen | 1. Lioresal | | |

Lampiran 8. Data pasien fraktur *neck femur* di Instalasi Rawat Inap RS Ortopedi Prof. Dr. R. Soeharso Surakarta pada bulan Januari-Oktober 2014

| No | Inisial Pasien | No RM | Jenis Kelamin | Umur (th) | BB (kg) | Tanggal Masuk | Tanggal Keluar | AST | ALT | Obat | Dosis |
|-----|----------------|--------|---------------|-----------|---------|---------------|----------------|-----|-----|------------|----------|
| 1. | TI | 248868 | P | 40 | 64 | 3 JAN | 9 JAN | 32 | 51 | Cefazolin | 2 x 2 gr |
| 2. | IT | 249132 | P | 62 | 56 | 5 JAN | 9 JAN | 24 | 13 | Cefazolin | 2 x 2 gr |
| 3. | SP | 249452 | P | 58 | 49 | 8 JAN | 13 JAN | 80 | 106 | Cefazolin | 2 x 1 gr |
| 4. | TJ | 249588 | P | 73 | 56 | 9 JAN | 17 JAN | 24 | 36 | Cefizox | 2 x 2 gr |
| 5. | SM | 249769 | P | 81 | 50 | 14 JAN | 21 JAN | 22 | 20 | Cefazolin | 2 x 2 gr |
| 6. | RB | 249824 | P | 74 | 64 | 15 JAN | 27 JAN | 13 | 20 | Ceftriaxon | 2 x 2 gr |
| 7. | YT | 249889 | P | 62 | 76 | 16 JAN | 21 JAN | 23 | 30 | Ceftriaxon | 2 x 2 gr |
| 8. | SF | 249983 | P | 61 | 59 | 17 JAN | 21 JAN | 13 | 12 | Cefazolin | 2 x 2 gr |
| 9. | SL | 250009 | L | 71 | 66 | 18 JAN | 25 JAN | 16 | 33 | Cefazolin | 2 x 2 gr |
| 10. | RH | 250654 | L | 60 | 72 | 31 JAN | 9 FEB | 13 | 18 | Cefazolin | 2 x 2 gr |
| 11. | IS | 250856 | P | 81 | 50 | 4 FEB | 7 FEB | 19 | 11 | Ceftriaxon | 2 x 2 gr |
| 12. | YO | 251062 | P | 69 | 58 | 8 FEB | 13 FEB | 28 | 17 | Cefazolin | 2 x 2 gr |
| 13. | TS | 252755 | L | 64 | 54 | 24 FEB | 28 FEB | 20 | 15 | Cefazolin | 2 x 2 gr |
| 14. | RY | 252974 | P | 14 | 50 | 28 FEB | 6 MAR | 12 | 8 | Cefazolin | 2 x 2 gr |
| 15. | AC | 253330 | P | 69 | 45 | 6 MAR | 7 MAR | 23 | 13 | Cefazolin | 2 x 1 gr |
| 16. | YH | 253414 | P | 33 | 53 | 7 MAR | 20 MAR | 19 | 11 | Cefazolin | 2 x 2 gr |
| 17. | SI | 253518 | P | 69 | 63 | 10 MAR | 14 MAR | 15 | 12 | Cefazolin | 2 x 2 gr |
| 18. | ST | 253727 | L | 77 | 54 | 13 MAR | 24 MAR | 21 | 6 | Cefazolin | 2 x 2 gr |
| 19. | SD | 253769 | L | 72 | 53 | 14 MAR | 20 MAR | 18 | 33 | Cefazolin | 2 x 2 gr |

| No | Inisial Pasien | No RM | Jenis Kelamin | Umur (th) | BB (kg) | Tanggal Masuk | Tanggal Keluar | AST | ALT | Obat | Dosis |
|-----|----------------|--------|---------------|-----------|---------|---------------|----------------|-----|-----|-----------|----------|
| 20. | WN | 253937 | P | 68 | 49 | 2 APR | 8 APR | 25 | 11 | Cefazolin | 2 x 1 gr |
| 21. | SA | 254737 | P | 58 | 47 | 2 APR | 8 APR | 21 | 6 | Cefazolin | 2 x 1 gr |
| 22. | SE | 254995 | P | 66 | 52 | 7 APR | 11 APR | 17 | 21 | Cefazolin | 2 x 2 gr |
| 23. | MI | 255164 | P | 56 | 40 | 13 APR | 20 APR | 28 | 27 | Cefazolin | 2 x 1 gr |
| 24. | SB | 255719 | L | 54 | 48 | 8 APR | 14 APR | 14 | 10 | Cefazolin | 2 x 1 gr |
| 25. | AR | 255939 | L | 23 | 42 | 20 APR | 29 APR | 12 | 17 | Cefazolin | 2 x 1 gr |
| 26. | SM | 257333 | P | 58 | 50 | 28 APR | 5 MEI | 21 | 16 | Cefazolin | 2 x 2 gr |
| 27. | VE | 257418 | P | 58 | 47 | 2 MEI | 9 MEI | 24 | 18 | Cefazolin | 2 x 1 gr |
| 28. | NG | 257616 | P | 84 | 52 | 3 MEI | 10 MEI | 22 | 13 | Cefazolin | 2 x 2 gr |
| 29. | MW | 258501 | L | 30 | 50 | 8 MEI | 12 MEI | 19 | 18 | Cefazolin | 3 x 2 gr |
| 30. | SE | 258565 | P | 27 | 60 | 7 MEI | 15 MEI | 31 | 24 | Cefazolin | 2 x 2 gr |
| 31. | TW | 260469 | P | 63 | 53 | 18 MEI | 23 MEI | 16 | 15 | Cefazolin | 2 x 2 gr |
| 32. | SY | 260671 | P | 68 | 59 | 29 MEI | 2 JUN | 21 | 40 | Cefazolin | 2 x 1 gr |
| 33. | KT | 260821 | P | 61 | 47 | 3 JUN | 10 JUN | 16 | 21 | Cefazolin | 2 x 1 gr |
| 34. | FT | 260925 | L | 19 | 74 | 10 JUN | 17 JUN | 13 | 28 | Cefazolin | 2 x 2 gr |
| 35. | AM | 261247 | P | 61 | 68 | 15 JUN | 21 JUN | 35 | 34 | Cefazolin | 2 x 2 gr |
| 36. | NJ | 261323 | L | 13 | 46 | 23 JUN | 29 JUN | 17 | 10 | Cefazolin | 2 x 1 gr |
| 37. | TE | 261332 | L | 76 | 68 | 21 JUN | 30 JUN | 21 | 12 | Cefazolin | 2 x 2 gr |
| 38. | EN | 261386 | P | 29 | 57 | 1 JUL | 5 JUL | 34 | 13 | Cefazolin | 2 x 2 gr |
| 39. | MU | 261513 | L | 53 | 65 | 4 JUL | 10 JUL | 12 | 42 | Cefazolin | 2 x 2 gr |
| 40. | SW | 261516 | P | 67 | 55 | 7 JUL | 18 JUL | 23 | 34 | Cefazolin | 2 x 2 gr |
| 41. | SP | 261660 | P | 64 | 72 | 18 JUL | 24 JUL | 32 | 45 | Cefazolin | 2 x 2 gr |
| 42. | SB | 261727 | L | 46 | 42 | 20 JUL | 29 JUL | 19 | 27 | Cefazolin | 2 x 1 gr |
| 43. | SO | 261769 | P | 63 | 64 | 23 JUL | 31 JUL | 16 | 28 | Cefazolin | 2 x 2 gr |
| 44. | WA | 261900 | P | 71 | 53 | 1 AGU | 9 AGU | 48 | 32 | Cefazolin | 3 x 2 gr |
| 45. | SU | 261961 | P | 74 | 63 | 4 AGU | 10 AGU | 32 | 14 | Cefazolin | 2 x 2 gr |
| 46. | RT | 262008 | L | 19 | 54 | 5 AGU | 9 AGU | 23 | 32 | Cefazolin | 2 x 2 gr |
| 47. | SP | 262073 | L | 37 | 63 | 13 AGU | 20 AGU | 13 | 31 | Cefazolin | 2 x 2 gr |

| No | Inisial Pasien | No RM | Jenis Kelamin | Umur (th) | BB (kg) | Tanggal Masuk | Tanggal Keluar | AST | ALT | Obat | Dosis |
|-----|----------------|--------|---------------|-----------|---------|---------------|----------------|-----|-----|------------|----------|
| 48. | ND | 262142 | P | 84 | 65 | 18 AGU | 27 AGU | 25 | 30 | Cefazolin | 2 x 2 gr |
| 49. | SR | 262181 | P | 80 | 53 | 23 AGU | 29 AGU | 31 | 20 | Cefazolin | 2 x 2 gr |
| 50. | MC | 262213 | L | 13 | 37 | 30 AGU | 2 SEP | 23 | 41 | Cefazolin | 2 x 1 gr |
| 51. | DR | 262502 | L | 70 | 64 | 1 SEP | 7 SEP | 21 | 12 | Cefazolin | 2 x 2 gr |
| 52. | MK | 262684 | P | 60 | 56 | 3 SEP | 9 SEP | 17 | 24 | Cefazolin | 2 x 2 gr |
| 53. | EK | 262734 | P | 67 | 67 | 2 SEP | 8 SEP | 13 | 16 | Cefazolin | 2 x 2 gr |
| 54. | SJ | 262781 | P | 59 | 56 | 5 SEP | 10 SEP | 12 | 24 | Cefazolin | 2 x 2 gr |
| 55. | KR | 262966 | L | 57 | 85 | 1 SEP | 6 SEP | 28 | 21 | Cefazolin | 3 x 2 gr |
| 56. | NT | 263303 | P | 76 | 48 | 7 SEP | 12 SEP | 12 | 31 | Cefazolin | 2 x 1 gr |
| 57. | SJ | 263414 | P | 82 | 78 | 9 SEP | 15 SEP | 25 | 15 | Cefazolin | 2 x 2 gr |
| 58. | NI | 263543 | P | 55 | 48 | 10 SEP | 16 SEP | 21 | 41 | Cefazolin | 2 x 1 gr |
| 59. | SI | 263549 | P | 79 | 57 | 11 SEP | 17 SEP | 12 | 34 | Cefazolin | 2 x 2 gr |
| 60. | SG | 263747 | L | 66 | 69 | 18 SEP | 22 SEP | 19 | 15 | Cefazolin | 2 x 2 gr |
| 61. | CH | 263807 | P | 23 | 75 | 17 SEP | 22 SEP | 13 | 12 | Cefazolin | 2 x 2 gr |
| 62. | SK | 263814 | L | 70 | 66 | 18 SEP | 24 SEP | 16 | 15 | Cefazolin | 2 x 2 gr |
| 63. | SI | 264014 | P | 37 | 64 | 19 SEP | 23 SEP | 13 | 23 | Ceftriaxon | 2 x 2 gr |
| 64. | IT | 264494 | P | 69 | 58 | 26 SEP | 3 OKT | 152 | 54 | Cefazolin | 2 x 2 gr |
| 65. | SU | 264552 | L | 39 | 75 | 5 OKT | 9 OKT | 17 | 19 | Cefazolin | 2 x 2 gr |
| 66. | US | 265156 | P | 24 | 64 | 7 OKT | 12 OKT | 23 | 12 | Cefazolin | 2 x 2 gr |
| 67. | ST | 265297 | P | 56 | 56 | 11 OKT | 13 OKT | 31 | 21 | Cefazolin | 2 x 2 gr |
| 68. | SH | 265334 | L | 26 | 67 | 12 OKT | 17 OKT | 31 | 11 | Cefazolin | 2 x 2 gr |
| 69. | RN | 265367 | L | 51 | 44 | 15 OKT | 19 OKT | 17 | 28 | Cefazolin | 2 x 1 gr |
| 70. | MF | 265480 | L | 8 | 23 | 14 OKT | 20 OKT | 21 | 31 | Cefazolin | 2 x 1 gr |
| 71. | SY | 265877 | P | 70 | 45 | 15 OKT | 17 OKT | 23 | 12 | Cefazolin | 2 x 1 gr |
| 72. | SK | 266824 | P | 20 | 63 | 21 OKT | 23 OKT | 32 | 21 | Cefazolin | 2 x 2 gr |
| 73. | NR | 266838 | P | 30 | 53 | 22 OKT | 25 OKT | 13 | 41 | Cefazolin | 2 x 2 gr |
| 74. | MO | 267438 | P | 13 | 45 | 24 OKT | 27 OKT | 32 | 42 | Cefazolin | 2 x 1 gr |