260. Surgery for infections and congenital diseases

P2397  
Experience of surgical treatment of massive purulent-destructive processes of the lungs and pleura  
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Given the conditions of the Far North and the specificity of the social status of some patients, we have extensive experience in the surgical treatment of massive, widespread purulent-destructive processes. Despite the possibility of treating this disease conservatively, performing minimally invasive procedures, we concluded that it remains relevant surgical radical intervention - lung resection, removal of empyema cavity, to prevent chronicity and recurrence of the process. We have experience treatment 679 patients: 310 conservatively, 369 surgical method of treatment. The main indications for radical surgery have been ineffective conservative therapy and the progression of the process, the recurrence of a chronic process, initially massive processes, life-saving operation: bleeding, a large pulmonary pleural fistula, the threat of sepsis(big abscess, gangrene and empyema).

We are get almost pations fit for the operation (conservative therapy). We performed 380 operations: 151-lobectomy, 15-hilobectomy, 64 atipical resections, 18- segmentectomy, 67- pneumectomy, 46- decortications and elimination of empyema cavity without resections, 16- VATS decortications, 9- reamputations stump of bronchus. We have good results after operations: only 5 pations died (1.3%), 48 - complications (13%) (13 of them - inconsistence of stump of bronchus), 360 pations (97.6%) - after radical intervations recovered.

P2398  
Effectiveness of partial lung resection at multi-drug resistance of tuberculosis mycobacteria  
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Partial resection of lung at multiple drug resistance of mycobacteria was performed in 59 patients (males -36, females - 23) in ages 17 – 54 years. All the patients had fibrous-cavernous tuberculosis with long clinical course (over 3 years) and resistance of mycobacteria to isoniazid + rifampicin in 4 patients, to isoniazid + rifampicin + streptomycin – in 24, to isoniazid + rifampicin + streptomycin + ethambutol – in 31. The characteristic peculiarities of illness were dissemination (61.0%) and progress (43.8%) of the tubercular process, pulmonary hemorrhage (27.1%), various somcomitant pathology (32.2%), and ineffectiveness of preceding long treatment. After pre-operative chemotherapy (pirazinamid + amicacin + ofloxacin + protionamide + paraaminosalicyc acid + cycloceril) with pneumoperitoneum, UV irradiation of blood, transfusion of protein, saline and synthetic solutions, a segmental lung resection was performed in 9 patients, lobectomy – in 38, combined resection – in 12.

After operations, bronchial fistula and pleural empyema developed in 4 patients, early re-activation of tuberculosis – in 3. These complications were eliminated in 6 patients. Good effectiveness of partial lung resection was reached in 58 patients (98.3%). One patient (1.7%) died from the progress of post-operative pleural empyema and cardio-pulmonary insufficiency.
Conclusions: Partial resections at fibrous-cavernous tuberculosis with multiple drug resistance of mycobacteria is a highly effective method of treatment and it heals 98.3% of patients with chronic pulmonary pathology.

P2399
Lung resection in hematologic patients with pulmonary invasive fungal disease:
changing pattern in recent years
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Background: Pulmonary invasive fungal disease (IFD) is a frequent complication in patients with hematologic malignancies. We analysed the outcome of 71 hematologic patients undergoing lung resection for suspected pulmonary IFD at a single centre and we compared patients operated before 2002 (group A n=41) with those undergoing surgery after 2002 (group B n=30). Forty-four patients were neutropenic and 41 had a platelet count below 50 x 10^9/L. 45 non-anatomical resections and 26 lobectomies were performed. Fungal infection was histologically proven in 53 patients. Reoperation was needed in 4 cases: bronchial stump dehiscence, persistent air leak, chylothorax and seroma. Minor complications at the site of surgery occurred in 14 cases. In only two cases there was an uncontrolled disseminated fungal infection. Overall mortality at 30 days was 7% (5/71). The age was significantly higher (group B 40y versus group A 49y; p=0.0239) in the recently operated patients. In addition, a significant difference in ASA classification was found in group A versus 90% in group B (p<0.0001).

Conclusion: Lung resection is a therapeutic option for hematologic patients suffering from pulmonary fungal infection with an acceptable morbidity and mortality. In recent years patients were older, sicker, VATS was performed more often and in a considerable number of cases rare fungi could be detected.

P2400
Argonplasma coagulation in surgery of pulmonary tuberculosis
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Background: Argonplasma coagulation (APC) proved itself to be a hematocit tool in various fields of surgery (Farin G., Grund K.E. 1994). Coagulation occurs without contact with the active electrode with the tissue, while the flow argon displaces the zone of coagulation of oxygen, which reduces burning of tissue. The problem of bleeding in surgery of severe forms of pulmonary tuberculosis (PTB) is difficult and unsolved.

Aim: To study APC in this field and assess initial (first) results.

Methods: APC was applied in 66 cavitory PTB patients with the help of High-frequency electrocoagulapc APC generator. Namely, in 13 pneumonectomies, in 20 lobectomies, and in 24 cases for debridement of empyema cavity including 12 transthoracic radiofrequency assisted resections (ITBR) in 17% in group B versus 90% in group A (p<0.001) was found between the two groups. Recently operated patients underwent VATS in 47% of cases as compared to 5% in group A. In contrast to group A there were 6 cases of rare fungal infections in group B (2 Histoplasma, 2 Rhizopus, Mucor, Zygomycetes).

Conclusion: Lung resection is a therapeutic option for hematologic patients suffering from pulmonary fungal infection with an acceptable morbidity and mortality. In recent years patients were older, sicker, VATS was performed more often and in a considerable number of cases rare fungi could be detected.

P2402
Simultaneously transdiaphragmatic approach to liver and lung cysts
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Background: Hydatid cysts are clinical problem at developing and non developed countries. Liver and lung are the two organs which they often settle. In this study we aimed to present lung and liver hydatid cysts which we underwent transdiaphragmatic surgery in a single patient.

Methods: Consecutive 50 patients with lung and liver hydatid cyst whom under went surgical treatment by transdiaphragmatical way at our clinic between January 1998 and December 2011 were evaluated retrospectively.

Results: Twenty-four (48%) patients were male and 26 (52%) patients were female. The average age of the patients was 34±21 (3-72 years old). All cases have liver cyst and 37 of them also have lung cyst. In 9 of the 37 patients with lung hydatid cysts, cysts were unilateral, and in the rest bilateral. In patients whom have multiple cysts the largest cyst diameter has been measured. In 40±21 months from the first laparotomy and one of them is approached with laparotomy and one of them is approached with median sternotomy. In 49 cases it was reoperated to liver and in 1 case it was intervented to lung by phrenotomy. Excessive biliary drainage was observed in 5 patients and 3 of them were drained through percutaneous drainage. Avarage hospital stay was 9±4 days (3-21 days).

Conclusion: Simultaneously transdiaphragmatic approach at lung and liver dome cysts is a safe and effective treatment method.

P2403
The management of postoperative complications in childhood pulmonary hydatid cysts
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Background: Hydatid disease in children has previously been discussed many times in the literature. However, management of postoperative complications has been rarely discussed. In this study, the complications of our cases are evaluated and discussed.

Material and methods: Ninety-seven patients under 16 years of age with hydatid cysts who were operated on between January 2001 and January 2007 were analyzed retrospectively. All the patients were followed up with examination and chest X-ray after surgery. The complications occurred in the first 48 hours after surgery are considered as early complications, and the complications between 48 hours and 14 days as late complications.

Results: 61 male and 36 female pediatric hydatid disease patients with a mean age of 10.31 were operated on. Postoperative first 48 hours, atelectasis was observed in 17 cases (17.5%) and bronchoscopy was performed for these patients. After 48 hours, pneumonia occurred in one patient and he was treated with antibiotics. Prolonged air leak was observed in 4 patients (4.1%) and they were treated with continued tube thoracostomy. 2 patients with prolonged air leak were hyperventilated with positive pressure under general anesthesia. Wound infection was seen in 2 patients. Regular wound dressing and antibiotic treatment were performed for these cases. Empyema was observed in 2 patients. In these cases antibiotics were given and tube thoracostomy was continued.

Conclusion: Atelectasis, which is the most common postoperative complication, should immediately be treated. It should be kept in mind that early treatment of atelectasis prevents the development of greater complications in children.

Sex, age, occupation, possible risk factors, surgical methods, pathological results and complications were considered.

436
How severe pulmonary hemorrhage influence on surgical tactics at patients with lung abscess and gangrene? 

Methods: We retrospectively investigated 42 consecutive pre-school patients who had pulmonary hemorrhage (blood loss more than 500 ml).

Results: At 1797 patients with lung abscess without severe pulmonary hemorrhage therapeutic methods were effective at 1490 patients (83,0%), chronicity of disease – at 274 patients (15,2%). We have performed 3 pneumonectomies, 121 lobectomies, 102 wedge resections. Mortality – 33 patients (1,8%). At 153 patients with lung gangrene without severe pulmonary hemorrhage resection of inflammation was achieved in 117 cases (76,5%). We performed 8 pneumonectomies, 69 lobectomies, 16 wedge resections. Mortality – 6 patients (3,9%). From 68 patients with severe pulmonary hemorrhage 10 died before operation. To another 58 patients at first we performed resection and vascular embolization of bronchial arteries, then 16 pneumonectomies, 42 lobectomies. General mortality – 26 patients (38,2%).

Conclusion: At patients with acute lung abscesses and lung gangrene operation must be performed at period of pneumotobiosis or at appearance of severe pulmonary hemorrhage.

Pre-school children with hydatid disease of lung

Methods: We retrospectively investigated 42 consecutive pre-school patients who were diagnosed and surgical treated for hydatid cysts in our clinical between January 1998 and December 2011.

Results: Seventeen (40.5%) patients were female and 25 (59.5) patients were male. The average age of the patients was 5.2±1.3 (between 2-7 ages). The most common symptoms were cough (%74), chest pain (%92.6) and fever (%92.6). Twenty eight cases’ cyst was in only one lung, in five case cyst was in single lung and liver, in six cases cyst was in bilateral lungs and liver, in three cases cyst was in bilateral lungs. Average cyst diameter was 6.2±2.4 (2-12 cm). It was interventioned to right lung and liver cysts by transdiaphragmatic approach together in five cases. In different seance operation was performed to nine patients: cyst was in bilateral lungs and liver cysts, in six cases cyst was in bilateral lungs, in three cases cyst was in bilateral lungs and liver cysts, in three cases cyst was in bilateral lungs and liver cysts. In total 22 pts underwent the operation (15 M, 7 F) at age 14-67 years. Insulin-dependent diabetes - 199 (77,43%), insulin-independent - 58 (22,57%): severe form - 174 (67,7%), moderate - 62 (24,13%), light - 21 (8,17%). Before reaching the Institute - chemotherapy (6 months) - 95 (36,9%), 6-12 months - 150 (58,37%), none - 12 (4,67%). Indications to operation: tuberculosis - 125 (48,64%), bronchovascular tuberculosis - 109 (42,41%), cavernous - 5 (1,95%), disseminated - 4 (1,56%), caseous pneumonia - 14 (5,45%).

Conclusion: Surgery is the definite treatment of lung hydatid cyst. The most important way to protect against adverse effects of thoracotomy is to eliminate routes of transmission.
evaluated until delivery at tertiary care centres. This approach guaranteed an early admission and immediate surgical treatment in our Institute. CT and angioCT were performed in all pts prior to operation to confirm diagnosis.

Results: All pts underwent open lateral thoracotomy (18 pts lobectomy, 4pts segmentectomy respectively). Age at intervention ranged 1-51 days (mean 19±4.6±5). All pts have been followed up at our Outpatients’ Clinic since operation. At present their ages range 0.3-6.4 yrs (mean 3.1±1.6). Development is normal. No increased number of respiratory infections is observed.

Conclusions: 1 Most CCAMs are diagnosed prenatally by means of routine USG analysis.
2 Early surgical treatment of CCAMs is safe and elective lobectomy appears to be very well tolerated.
3 Follow-up shows that early surgical intervention does not disturb development of those children.

P2411
Computed tomography-detected apical bullae in young men with Marfanoid phenotype

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Subpleural bullae in young men are often the cause of primary spontaneous pneumothorax (SP), which is one of the common thoracic surgical conditions requiring hospital admission. Screening and prevention SP have not been developed so far because the lung bullae pathogenesis in young people is not known. One hypothesis suggests a hereditary weakness of the connective tissue, the most studied in patients with Marfan syndrome. The aim of this study was to investigate the prevalence of apyramometric bullae among young patients with Marfanoid phenotype. High-resolution computed tomography (CT) performed 50 clinically healthy men with no episodes of primary SP in history. Marfanoid phenotype was diagnosed in identifying specific major and minor criterion (skeletal, skin, eye, vascular, and others), which together made it impossible to diagnose the full Marfan syndrome. Deficiency of alpha 1-antitiprin was rejected after a genetic test. The average age of the surveyed was 24 years. The men were smokers with a little history of smoking. CT showed the presence of bullae in 12 men (24%). The frequent maximal size of bullae was 0.5-1 cm and the average number of bullae was 1-6. In almost all of the cases bullae were located in the apex. In 5 cases bullae were spread more extensively and were found up to the level of the carina and in 2 patients also below the carina. Correlation analysis confirmed the association between bullus and smoking history, as well as the severity of skeletal changes. These data confirm the importance of hereditary diseases of connective tissue in the genesis of bullous emphyesma. CT scan may be useful for determining the risk and prevention of primary SP.

P2412
An extraordinary triplet and a single surgery: Lung cancer, retained bronchial foreign body and actinomycosis

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This unique and previously undocumented report illustrates an extremely rare cooccurrence of early staged-primary bronchial carcinoma, retained organic bronchial foreign body and actinomycosis on the right lower lobe of a patient in whom resective surgery was curative. A 67-year-old man was hospitalized to evaluate the etiology of recurrent pneumothorax. Thoracic computed tomography revealed an ill-defined mass with heterogeneous density, invading nearly total of the right lower lobe. Fibreoptic bronchoscopy showed a rigid, mobile, gray endobronchial lesion on the orilis of right lower subsegments associated with dense granulation tissue. Histopathological examination of the biopsy from the upper segment was reported as bronchogenic carcinoma. Right lower lobectomy was performed. During the removal of the lower lobe, a hard, brownish foreign body was detected on the orific of lower lobe subsegments. The foreign body was then extracted of “cherry laure”. Also in the parenchyma, focal fields of actinomycosis was detected. In cases with retained bronchial foreign body in whom chronic respiratory problems (actinomycosis as well) lead investigative approaches, a simple bronchoscopy may offer the chance of the diagnosis of an early-stage bronchogenic carcinoma. It is a debate to conclude that chronic retained foreign body is the cause of the neoplastic course.

P2413
Diaphragmatic plication for diaphragmatic eventration: An evaluation of mid-term results

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Diaphragmatic eventration is a rare congenital anomaly in the musculary portion of the diaphragm. Eventration of the diaphragm is occur due to congenital or acquired etiology, is thought to be caused by an acquired complete or in complete paralysis of the diaphragmatic leaf. Operative repair is indicated for adult patient who has symptoms. Classically transthoracic approach and diaphragmatic plication have been the approaches of choice for symptomatic diaphragmatic eventration. The aim of our study was to objectively assess our mid-term results of diaphragmatic plication for hemidiaphragmatic eventration with the use of PTF. We performed 28 diaphragmatic plication and analysed pre and postoperative pulmonary function tests (PFT) at our institution between 2006-2012. All operation performed under laterally decubitus position and one lung ventilation. The classical approach was a posterolateral diaphragmatic approach through 7th intercostal space. The thinned diaphragmatic leaf was repaired with plication. We compared pre and postoperative PFT, we found significant improvements in PFT results at 3 months after operation. We had no postoperative mortality or any other major complication. Diaphragmatic plication for hemidiaphragmatic eventration demonstrated significant mid-term improvements in systolic and pulmonary function test results.

P2414
Complex surgical solution for thoracic wall necrotizing fasciitis

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Necrotizing fasciitis of thoracic wall is a severe disease which is associated with a high rate of mortality, especially for immunosupressed patients. Multiple drainage incisions, excision of necrotic tissues and appropriate antibiotics therapy represent the right therapeutic solution.

The authors present the case of 43 years old male, diagnosed with left empyema secondary to pulmonary tuberculosis. A left tube thoracotomy was performed for drainage, followed by surgical empysema (secondary to increase air leaks) and necrotizing fasciitis surrounding the tube thoracotomy, which has extended to left hypochondrium. First, multiple drainage incisions were performed, with excision of necrotic tissues and antibiotics.

Azonin’s procedure was performed after, closing the main bronchus and the air leaks were stopped.

After 18 days, the thoracic wall wounds were healed, allowing left pneumonectomy to be performed. Sputum exam became negative soon after closing the left main bronchus.

Closin the left main bronchus using the Azonin’s procedure stopped the air leaks, which led to decreased of microbial contamination of the thoracic wall wounds and good out-come.

438s

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Thoracoscopic video-assisted partial resection of rib for pain control in patient with atypical pulmonary and bone Langerhans histiocytosis

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Introduction: Langerhans histiocytosis (LH) is a rare disease that occurs in 1:2:2 millions of people, which affects mainly children and adults between twenty and forty years old. Bones affection is an rarely occurs.

Clinical case: A 19 year old female with severe pain and discomfort of left subskapular area. After CT procedure, it was found that there are bilaterally a great number of small diffusely scattered nodular lesions in the lung parenchyma and formations, destructed cortex on the 5-th rib with the suspected for histiocytosis X.

Treatment: A video-assisted thoracoscopic (VATS) partial resection of the fifth rib has been made, under three port. Lung biopsy has been made over several suspected lesions. The postoperative period has been uneventful. The pain and the discomfort were reduced.

Conclusion: VATS resection of the rib could be a good modern approach to eradicate or interference of pain in the rib LH. VATS remains the ultimate cross-cutting unique therapeutic approach for the treatment of the bone Langerhans-cellular histiocytosis and change the quality of life in these patients.