

中国医学影像技术

ZHONGGUO YIXUE YINGXIANG JISHU

月刊 1985年创刊 第36卷 第4期 2020年4月20日出版

主管 中国科学院
主办 中国科学院声学研究所
名誉主编 刘玉清 唐孝威 王威琪
主编 李坤成 李建初
副主编 陈涛 冯逢 何文
李亚明 任卫东 孙应实
田家玮 王培军 王小民
王振常 吴青青 伍建林
谢明星 余永强 郑海荣
社长 郑春见
总编辑 王艳萍
编辑出版 《中国医学影像技术》期刊社
印刷 北京科信印刷有限公司
发行 国内:中国邮政集团公司
北京市报刊发行局
国外:中国国际图书贸易集团
有限公司
北京399信箱,100048
代号:M1344
订购 全国各地邮局
邮发代号 82-509
邮购 100190 北京市海淀区北四环
西路21号大猷楼502室
电话、传真:(86-10)82547903
定价 每册26元 全年312元
中国标准连续出版物号
ISSN 1003-3289
CN 11-1881/R
广告发布登记 京海工商广登字20170116号
网址 www.cjmit.com
E-mail cjmit@mail.ioa.ac.cn
2020年版权归《中国医学影像技术》
期刊社所有

目次

专论

- 超声心动图检查瓣膜性心脏病仍无止境 张梅,徐铭俊(481)
实时经食管三维超声心动图在牛心包主动脉瓣置换术中的应用 李菁,马小静,程冠(484)
超声数据3D打印制作二尖瓣模型的可行性 杨远婷,宋宏宁,陈思楷,王浩,宋弯弯,郭娟,邓倾,周青(489)
超声心动图评价偏心性主动脉瓣反流所致室壁冲击伤 孙佳英,黄云洲,王翠华,李冬蓓,任书堂,龙进,王勇,周建华,李婷,徐冬生(494)
纵向应变评估主动脉瓣狭窄置换术后心肌功能 李茜,唐红(499)
超声诊断二叶主动脉瓣合并感染性心内膜炎 马青艳,陈欧迪,费洪文,简旭华,林琼雯,谢秋,许瑞雪(503)

实验研究

- 基于中智相似积分算法心肌超声造影系统自动定量分析缺血再灌注大鼠存活心肌 孙智超,王飞,张运帷,王爽,于海源,沈文茜,陈双,吴言,郭延辉,田家玮,杜国庆(508)

中枢神经影像学

- MRI测量中国汉族不同性别正常成人枕叶体积 秦蕊,陈楠,李坤成(514)
基于自动脑分割技术分析中国正常中老年人群脑结构体积 张春艳,程敬亮,陈晨,赵瑞琛,彭媛媛(519)

头颈部影像学

- 超声分级诊断评估颈部肿大淋巴结恶性风险 王晓荣,艾迪拜·木合买提,贾芳,宋涛(524)

心脏、血管影像学

- 三维斑点追踪技术联合SYNTAX评分评价复杂冠状动脉疾病 陈晓菲,姜志荣,孙品,何香芹,王小凡,吕启凤,宋晓霞,田雨(529)

胸部影像学

- 人工智能肺结节辅助诊断系统预测亚实性肺结节恶性概率 陈疆红,钟朝辉,江桂莲,杨正汉,王振常,王大为(535)
超声监测膈肌增厚率评价机械通气患者拔管结局 龙玲,赵浩天,任珊,何聪,赵鹤龄(540)
基于CT平扫图像纹理分析鉴别浸润性肺腺癌与非钙化结核球 黄栎有,王延花,高先聪(545)

腹部影像学

- 高频探头联合端扫式凸阵腔内探头经会阴超声诊断肛瘘 闫有青,张翠红,刘翠翠,陈正光(550)
CT纹理分析鉴别诊断胰腺导管腺癌、胰腺神经内分泌肿瘤及实质性假乳头状肿瘤 王俊,孙阳,张燕燕,纪婉莹,刘屹(554)

妇产科影像学

- MRI 评估早期宫颈癌间质浸润深度 朱江慈, 曹 崑, 李晓婷, 李海蛟, 孙应实(559)
氨基质子转移成像及扩散峰度成像用于宫颈鳞癌病理分级 侯孟岩, 孟 楠, 张 梦, 刘文玲, 韩东明, 任继鹏(564)
月经状态对不同病理类型宫颈癌表观弥散系数值的影响 董 越, 董瑞彤, 于岩岩, 张 瑞, 胡启云, 于 韶, 刘 凡, 罗娅红(569)

生殖泌尿影像学

- MR 扩散张量成像评估高尿酸血症患者肾损伤 程仲元, 冯友珍, 胡俊娇, 林绮婷, 蔡香然(574)
阴囊超声用于选择梗阻性无精子症治疗方法 李康宁, 余 杨, 邓又斌, 李开艳, 王 涛(579)

医学物理与工程学

- 3D 均值中值滤波参数对 3D 有序子集期望最大化重建图像的影响 甄琰明, 张金铭, 曲桂红, 袁 波, 赵书俊(584)
人脑血氧水平依赖信号有源仿真和成像 李洪宇, 贾春涛, 陈 迟, 邱建峰(590)

影像技术学

- 选择一体化 PET/MR 小病灶图像重建方案 田德峰, 杨宏伟, 庄静文, 严汉民, 卢 洁(596)
不同 CT 扫描参数与迭代去金属伪影算法效果的相关性 彭 刚, 张志伟, 郁 斌, 郁仁强(601)
器官剂量调制技术在儿童鼻旁窦 CT 扫描中的应用 庄勋慧, 李伟凯, 鹿 松, 宋修峰(606)
双源 CT 测定甲状腺碘含量与甲状腺功能的相关性 李正腾, 王 敏, 潘冬梅, 任佳忠, 刘洪梅, 李 晴(610)

综述

- 超声心动图评估射血分数保留型心力衰竭患者右心结构及功能研究进展 刘修颖, 孙 阳(614)
孤独症谱系障碍相关 SPECT 及 PET 研究进展 祁 纳, 赵 军(618)

经验交流

- 腮腺黏液表皮样癌超声及 CT 表现 马西顺, 杜丽珍, 孙 婷, 韩彤亮(622)
斜行强回声大界面发生彩色多普勒血流显像像伪差及其发生机制 郭宝生, 任卫东, 喻晓娜, 李 颖, 肖杨杰, 王 欣, 张 晶(624)
10 例原发性甲状腺鳞状细胞癌超声及 CT 表现 张 济, 苏自杰, 张振华, 吴 刚, 李 闻(627)

个案报道

- 超声诊断颈部迁徙性鱼刺异物 2 例 倪茂杰, 刘 学, 蒋 迪(518)
超声心动图诊断先天性二尖瓣上环 1 例 张 甜, 马小静(553)
超声诊断大网膜妊娠 1 例 喻红霞(568)
原发性甲状旁腺鳞状细胞癌超声表现 1 例 韩雨农, 程伟波, 高 翔(589)
超声心动图误诊先天性右心房壁瘤 1 例 彭 娟, 陈 莉, 刘志兴(595)
先天性纤维性左心室憩室 1 例 唐海霞, 林 凌, 钟文津, 刘丽莉(605)
三维彩色多普勒超声联合 CTA 诊断肠系膜上动脉多发动脉瘤 1 例 蔡锦杏, 王贤明, 郑国良(630)
Pallister-Hall 综合征 1 例 李辛子, 陈 静, 王春祥(631)
竖脊肌骨外间叶细胞软骨肉瘤 1 例 潘冬梅(632)
超声诊断单卵三胎妊娠无心畸胎序列征 1 例 张为霞, 路 会, 张 洁(633)
小脑不典型间变性少突胶质瘤影像学表现 1 例 徐 圆, 曹正业, 沈 力, 吴晶涛, 叶 靖(634)
主动脉夹层继发急性心肌梗死误诊为冠心病急性心肌梗死 1 例 王振花, 李潮生, 陈 军(635)
产前超声诊断右侧异构并膈疝 1 例 许金枝, 宋 娟, 何俏闻, 曾 鹤, 王 瑜(636)
原发性甲状腺功能亢进症致棕色瘤 1 例 楚克涛, 罗章伟(637)
产前超声诊断胎儿开放性脊柱裂合并 18-三体综合征 1 例 周 游, 刘新秀, 王文华, 李建华, 叶 真, 辜秋阳, 徐 晶, 王华铭(638)
右心声学造影联合选择性肺动脉栓塞治疗肺动静脉畸形 1 例 潘 宇, 袁玉玲(639)
原发性宫颈非霍奇金淋巴瘤超声表现 2 例 严霞瑜, 罗 红(640)

消息 (483, 488, 498, 513, 534, 549, 573, 578, 583, 609, 629)

本期执行主编 李坤成 田家玮

本期执行编委 潘诗农 张 梅

本期责任编辑 冯 洁 本期校对 毕会阳

CHINESE JOURNAL OF MEDICAL IMAGING TECHNOLOGY

Monthly Established in 1985 Vol 36, No 4 Apr 20, 2020

Responsible Institution

Chinese Academy of Sciences

Sponsor

Institute of Acoustics,
Chinese Academy of Sciences

Honorary Editor

LIU Yuqing TANG Xiaowei
WANG Weiqi

Editor-in-Chief

LI Kuncheng LI Jianchu

Associate Editor

CHEN Tao FENG Feng HE Wen
LI Yaming REN Weidong
SUN Yingshi TIAN Jiawei
WANG Peijun WANG Xiaomin
WANG Zhenchang WU Qingning
WU Jianlin XIE Mingxing
YU Yongqiang ZHENG Hairong

President

ZHENG Chunjian

Chief Editor

WANG Yanping

Editing and Publishing

Press of Chinese Journal of
Medical Imaging Technology

Printing

Beijing Kexin Printing Co., Ltd.

Overseas Distributor

China International Book Trading
Corporation
P. O. Box 399, Beijing 100048, China
Code No. M1344

Mail Order

Room 502, Da-you Building,
No. 21, North 4th Ring West Road,
Haidian District, Beijing 100190, China
Tel, Fax: (86-10)82547903

Price (Foreign)

USD \$ 26.00

CSSN ISSN 1003-3289
CN 11-1881/R

Website www.cjmit.com

E-mail cjmit@mail.ioa.ac.cn

Copyright©2020 by the Press of Chinese
Journal of Medical Imaging Technology

Contents in Brief

Focal Topics

Echocardiography for valvular heart disease is still endless (481)

ZHANG Mei, XU Mingjun

Application of real-time 3D-transesophageal echocardiography in aorta valve replacement with

bovine pericardium (484)

LI Jing, MA Xiaojing, CHENG Guan

Feasibility of 3D printing of mitral valve model based on echocardiographic data (489)

YANG Yuanting, SONG Hongning, CHEN Sikai, WANG Hao, SONG Wanwan, GUO Juan,

DENG Qing, ZHOU Qing

Echocardiographic evaluation of myocardial impact injury caused by eccentric aortic regurgitation (494)

SUN Jiaying, HUANG Yunzhou, WANG Cuihua, LI Dongbei, REN Shutang, LONG Jin, WANG Yong,
ZHOU Jianhua, LI Ting, XU Dongsheng

Longitudinal strain in assessing myocardial mechanics in patients with severe aortic stenosis

undergoing aortic valve replacement (499)

LI Xi, TANG Hong

Echocardiographic diagnosis of bicuspid aortic valve combined with infective endocarditis (503)

MA Qingyan, CHEN Oudi, FEI Hongwen, JIAN Xuhua, LIN Qiongwen, XIE Qiu, XU Ruixue

Experimental Study

Automatic quantitative assessment of viable myocardium after ischemia-reperfusion using

myocardial contrast echocardiography based on neutrosophic similarity score system (508)

SUN Zhichao, WANG Fei, ZHANG Yunwei, WANG Shuang, YU Haiyuan, SHEN Wengqian,

CHEN Shuang, WU Yan, GUO Yanhui, TIAN Jiawei, DU Guoqing

Neuroimaging

MRI measurement of occipital lobe volume in different genders of healthy Han Chinese adults (514)

QIN Han, CHEN Nan, LI Kuncheng

Analysis of brain structural volume in Chinese normal middle-aged and elder population based on

automatic brain segmentation technology (519)

ZHANG Chunyan, CHENG Jingliang, CHEN Chen, ZHAO Ruichen, PENG Yuanyuan

Head and Neck Imaging

Ultrasonographic classification for evaluating malignant risk of cervical lymphadenopathy (524)

WANG Xiaorong, AIDIBA·Muhemaiti, JIA Fang, SONG Tao

Heart and Vascular Imaging

Three-dimensional speckle tracking imaging combined with SYNTAX score in evaluating

complex coronary artery disease (529)

CHEN Xiaofei, JIANG Zhirong, SUN Pin, HE Xiangqin, WANG Xiaofan, LYU Qifeng,

SONG Xiaoxia, TIAN Yu

Chest Imaging

Predicting malignant probability of subsolid nodules with artificial intelligence-assisted pulmonary

nodule diagnosis system (535)

CHEN Jianghong, ZHONG Zhaojun, JIANG Guilian, YANG Zhenghan, WANG Zhenchang, WANG Dawei

Ultrasound monitoring of diaphragm thickness fraction in evaluating extubation outcome in

patients undergoing mechanical ventilation (540)

LONG Ling, ZHAO Haotian, REN Shan, HE Cong, ZHAO Heling

Identification of invasive lung adenocarcinoma and non-calcified lung tuberculoma on plain

CT images based on texture analysis (545)

HUANG Liyou, WANG Yanhua, GAO Xiancong

Abdominal Imaging

High frequency probe combined with end scan convex array intracavitary probe transperineal

ultrasonography in diagnosing anal fistula (550)

YAN Youqing, ZHANG Cuihong, LIU Cuicui, CHEN Zhengguang

CT texture analysis in differential diagnosis of pancreatic ductal adenocarcinoma, pancreatic

neuroendocrine tumor and solid pseudopapillary tumor (554)

WANG Jun, SUN Yang, ZHANG Yanyan, JI Wanying, LIU Yi

Obstetrical and Gynecological Imaging

MRI assessment of early cervical cancer invasion depth of stroma (559)

ZHU Huici, CAO Kun, LI Xiaoting, LI Haijiao, SUN Yingshi

Amide proton transfer imaging and diffusion kurtosis imaging in differentiating histological

grade of cervical squamous cell carcinoma (564)

HOU Mengyan, MENG Nan, ZHANG Meng, LIU Wenling, HAN Dongming, REN Jipeng

Impact of menstrual status on the apparent diffusion coefficient of different pathological types of cervical cancer	.....	(569)
DONG Yue, DONG Ruitong, YU Yanyan, ZHANG Rui, HU Qiyun, YU Tao, LIU Fan, LUO Yahong		
Genitourinary Imaging		
Assessing kidney injury of hyperuricemia patients with MR diffusion tensor imaging	.....	(574)
CHENG Zhongyuan, FENG Youzhen, HU Junjiao, LIN Qiting, CAI Xiangran		
Scrotal ultrasonography for treatment choice of obstructive azoospermia	.....	(579)
LI Kangning, YU Yang, DENG Youbin, LI Kaiyan, WANG Tao		
Imaging Physics and Engineering		
Influence of 3D mean-median filter parameters on 3D ordered subsets expectation maximization reconstructed images	.....	(584)
ZHEN Yanming, ZHANG Jinning, QU Guihong, YUAN Bo, ZHAO Shujun		
Active simulation and imaging of human brain blood oxygenation level dependent signal	.....	(590)
LI Hongyu, JIA Chuntao, CHEN Tiao, QIU Jianfeng		
Imaging Technology		
Selection of integrated PET/MR image reconstruction scheme for small lesions	.....	(596)
TIAN Defeng, YANG Hongwei, ZHUANG Jingwen, YAN Hanmin, LU Jie		
Correlations of different CT scanning parameters and the effect of iterative metal artifact reduction algorithm	.....	(601)
PENG Gang, ZHANG Zhiwei, YU Bin, YU Renqiang		
Application of organ dose modulation technique in CT scanning of children paranasal sinus	.....	(606)
ZHUANG Xunhui, LI Weikai, LU Song, SONG Xiufeng		
Dual-source CT evaluation on correlation between thyroid function and thyroid iodine concentration	.....	(610)
LI Zhengteng, WANG Min, PAN Dongmei, REN Jiazhong, LIU Hongmei, LI Qing		
Review		
Research progresses of echocardiography in evaluation of right heart structure and function in heart failure with preserved ejection fraction patients	.....	(614)
LIU Xuying, SUN Yang		
Research progresses of SPECT and PET in autism spectrum disorder	.....	(618)
QI Na, ZHAO Jun		
Clinical Experiences		
Ultrasonographic and CT findings of parotid gland mucoepidermoid carcinoma	.....	(622)
MA Xishun, DU Lizhen, SUN Ting, HAN Tongliang		
Mirror-image artifact of color Doppler flow imaging due to oblique strong echo big interface and its mechanism	.....	(624)
GUO Baosheng, REN Weidong, YU Xiaonan, LI Ying, XIAO Yangjie, WANG Xin, ZHANG Jing		
Ultrasonographic and CT findings of 10 patients with thyroid primary squamous cell carcinoma	.....	(627)
ZHANG Ji, SU Zijie, ZHANG Zhenhua, WU Gang, LI Chuang		
Case Report		
Ultrasonic diagnosis of migrating fish bone in the neck: Report of 2 cases	.....	(518)
NJ Maojie, LIU Xue, JIANG Di		
Echocardiographic diagnosis of congenital supravalvular ring: Case report	.....	(553)
ZHANG Tian, MA Xiaojing		
Ultrasonic diagnosis of omentum pregnancy: Case report	.....	(568)
YU Hongxia		
Ultrasonic findings of primary parathyroid squamous cell carcinoma: Case report	.....	(589)
HAN Yunong, CHENG Weibo, GAO Xiang		
Echocardiographic misdiagnosis of congenital right atrial aneurysm: Case report	.....	(595)
PENG Juan, CHEN Li, LIU Zhiying		
Congenital fibrous left ventricular diverticulum: Case report	.....	(605)
TANG Haixia, LIN Ling, ZHONG Wenjin, LIU Lili		
Three-dimensional color Doppler ultrasound combined with CTA for diagnosing multiple aneurysms of superior mesenteric artery: Case report	.....	(630)
CAI Jinxing, WANG Xianming, ZHENG Guoliang		
Pallister-Hall Syndrome: Case report	.....	(631)
LI Xinzi, CHEN Jing, WANG Chunxiang		
Extraosseous mesenchymal chondrosarcoma of erector spinae: Case report	.....	(632)
PAN Dongmei		
Ultrasonic diagnosis of acardia sequence in aneuploid triplet: Case report	.....	(633)
ZHANG Weixia, LU Hui, ZHANG Jie		
Imaging findings of atypical cerebellar anaplastic oligodendroglomas: Case report	.....	(634)
XU Yuan, CAO Zhengye, SHEN Li, WU Jingtao, YE Jing		
Secondary acute myocardial infarction of aortic dissection misdiagnosed as acute myocardial infarction of coronary heart disease: Case report	.....	(635)
WANG Zhenhua, LI Chaosheng, CHEN Jun		
Prenatal ultrasonic diagnosis of right isomerism combined with diaphragmatic hernia: Case report	.....	(636)
XU Jinzhi, SONG Juan, HE Qiaoyue, ZENG He, WANG Yu		
Brown tumor caused by primary hyperparathyroidism: Case report	.....	(637)
CHU Ketao, LUO Zhangwei		
Prenatal ultrasonic diagnosis of spinal bifida aperta of fetus with trisomy 18: Case report	.....	(638)
ZHOU You, LIU Xinxiu, WANG Wenhua, LI Jianhua, YE Zhen, GU Qiyang, XU Jing, WANG Huaming		
Contrast echocardiography of right heart combined with transcatheter selective pulmonary artery embolization for treatment of arteriovenous malformation: Case report	.....	(639)
PAN Yu, YUAN Yuling		
Ultrasonic findings of primary cervical non-Hodgkin lymphoma: Report of 2 cases	.....	(640)
YAN Xiayu, LUO Hong		