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Editorial



Dr C K Ponde Dr Manish Bansal

Dear colleague,

Greetings!

As you are aware, the 1st issue of this IAE e-Newsletter was released in Feb 2017. We received a lot of encouraging comments as well as valuable constructive feedback in response to the same. Incorporating all these suggestions, we now bring to you the second issue of this e-Newsletter.

Our academy has been making steady progress all these months. Not only our membership has grown further, our new, redesigned website was launched in the month of February while the 1st issue of our journal (JIAE & CVI) on the new platform was released in April. Both the website and the journal aim to serve as excellent avenues for our members to address all their academic/ non-academic needs related to IAE activities.

At the same time, the preparation for our next annual meeting- Echo India 2017 (World Congress of Cardio Echo 2017)- are in full swing. The meeting is scheduled on 5th-8th October 2017 at Jaipur. From an excellent faculty and an excellent scientific program to the rich cultural heritage of Jaipur, there is every reason to attend this meeting. The meeting also provides an excellent opportunity to showcase your work or to obtain IAE accreditation or IAE fellowship. We eagerly look forward to enjoy the scientific and cultural feast that this meeting promises and encourage all of you to also register for the same at the earliest.

We would also like to take this opportunity to thank our current IAE President, all our Past Presidents, other respected members of the Executive Committee and the office-bearers of the Local Chapters of IAE for their contributions, inputs and constant guidance.

We sincerely hope that you will find this newsletter useful and informative, and will appreciate this endeavor.

Look forward to receive your valuable feedback.

With warm regards,

Dr C K Ponde/ Dr Manish Bansal
Editors, IAE e-Newsletter

Contents

Contents

- **Editorial** 1
- **Forty Years of Echocardiography in India: From Past to Present** 1
- **News from the Academy** 2
 - IAE website
 - JIAE and CVI
 - 1st EC meeting 2017
- **Echo India 2017 (World Congress of Cardio-Echo 2017)** 3
 - Meeting information
 - IAE accreditation, FIAE, case competitions
- **Report from the Local Chapters** 4,5
- **News from our international partners** 5
- **New science from around the World** 6
 - Guidelines Watch
 - Good Reviews
- **Revisiting the Basics: Estimating right atrial pressure** 6
- **Councils and Committees** 7
- **Upcoming events** 7
- **Echo Quiz** 7
- **Ongoing activities** 7

Forty Years of Echocardiography in India: From Past to Present

Dr (Col) S K Parashar, Past President, IAE

The technological advances in echocardiography (echo) in India, starting from M-mode echo era, have matched and not lagged behind the Western countries. Though the first M-mode echo machine was installed at the Army Hospital, Delhi in 1975, the real and scientific development of clinical echo in India was initiated almost simultaneously in this hospital and at Madras Medical College (MMC), Chennai in the year 1977-78. Peripheral venous contrast echo was first introduced in this country at Army Hospital, Delhi in 1977. Those were the days when recordings were obtained on ultraviolet paper in strip chart recorder. The recordings used to fade away if exposed to sunlight, hence a lot of care was needed in storing the images. In 1979, the Head of the Department of Cardiology at MMC took some of the echo tracings for a DM examination. The examiners were very impressed and suggested to bring out a text book on M-mode echo, and the first text book was published in the year 1979-1980.

Given the inherent limitations of one-dimensional study, 2-D echo was a big step forward in the progress of echo. One of the first 2-D echo machines was installed at Trivandrum Medical college in July 1978. As Kerala was an epicentre for endomyocardial fibrosis (EMF), the cardiologists there did an extensive work on EMF which was nationally and internationally recognized. During the period 1980-1984, practically every major cardiology centre in India had a 2-D echo machine. The main limitation, at this stage, was that the equipment provided only anatomical and functional information but hemodynamic information was largely lacking.

During the period 1984-1985, color Doppler came into being, which was considered as a major breakthrough in cardiovascular ultrasound. In 1985, for the first time, a national workshop on color Doppler echocardiography was organized in Delhi under the guidance of Navin C Nanda and Natesa G Pandian. This was a big teaching experience and led to widespread awareness and propagation of this technology. Soon it became an integral part of clinical echo examination and replaced invasive hemodynamic studies in various cardiac disorders by providing complete anatomical and quantitative information.

In the early nineties, TEE emerged as an extremely useful imaging modality, by producing superb images. Initially only mono- and biplane probes were available but soon multiplane transducer systems became available that provided a panoramic view of the heart- from 0-180°- in quick-time. TEE therefore became the ideal modality for intraoperative decision-making, guidance of transcatheter procedures, and for overall enhancing the diagnostic utility of echo, particularly in critically ill patients. Cardiologists at the Escorts Heart Institute, Delhi played an important role in promoting the use of TEE in day-to-day clinical decision-making. The recent introduction of 3-D TEE has further enhanced the utility of TEE by offering realistic surgical views of the valves and other intracardiac structures.

As mentioned earlier, saline contrast echo was introduced much earlier in India but it could opacify left ventricle only if there was a right-to-left intracardiac shunt. To overcome this problem, special ultrasound contrast agents were developed and two of them- Definity®, which was later withdrawn, and Sonovue®- were introduced in the Indian market in the year 2004-05. Asian Heart institute, Mumbai and later Jupiter hospital, Thane are credited for promulgating the use of contrast echo in India, both at rest and during stress echo.

The developments in the modern, real time 3-D echo, or 4-D echo as it is often called, together with color Doppler imaging, began in the last decade with the development of matrix array transducer. Extensive work on 3-D echo, 2-D and 3-D speckle tracking was done at Jeyalakshmi Heart Center, Madurai and the first Manual of 3-D Echo was published from that centre.

No progress in any field of medicine is possible without adequate teaching and training. The propagation of echo in this country was provided by IAE and JROP Institute of Echocardiography, Ultrasound and Vascular Doppler, which is one of the finest training institutes in the country. The revamped journal of IAE is also playing a significant role in this regard. All our members of IAE are advised to remain updated with all aspects of echo, including newer advances, for the benefit of our patients.

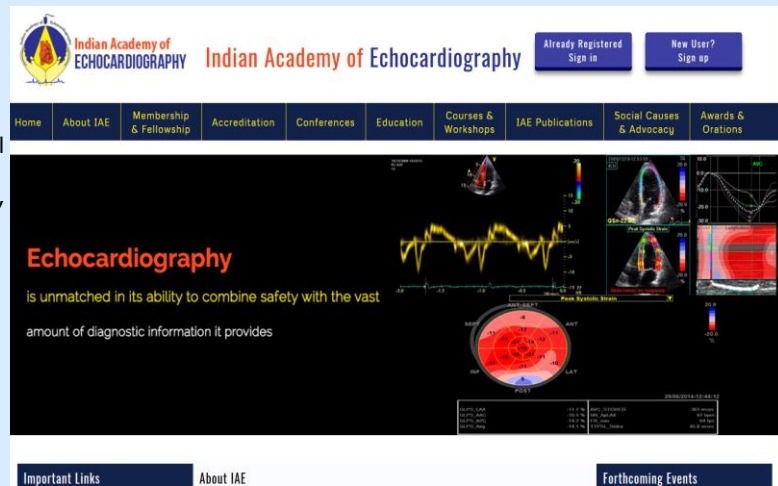
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News from the Academy

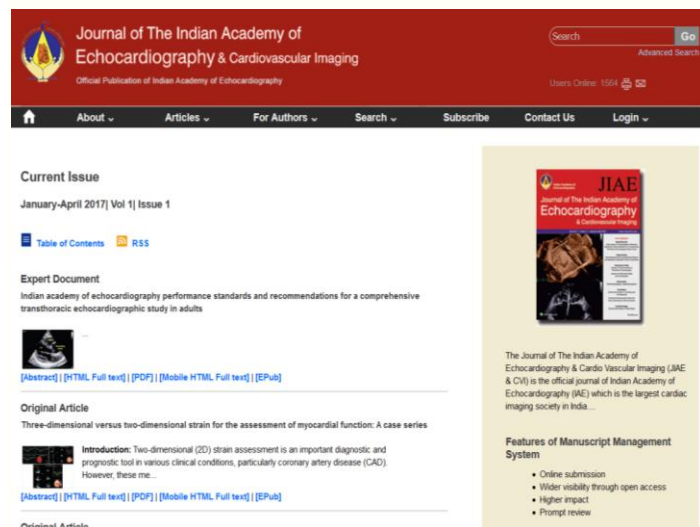
IAE Website is redesigned

- Early this year, the new, redesigned website of IAE (www.iaecho.in) was launched with the aim to make it more visually appealing as well as more informative, educative and beneficial to our members.
- The new website is exhaustive, providing detailed information about IAE organizational structure, its local chapters, international alliance partners, IAE membership/ fellowship/ accreditations, educational and social activities of the IAE, IAE publications, JIAE, various awards, patient resources etc.
- All the content is categorized according to the context to make it easy to navigate through the website and obtain the required information.
- The new website has also allowed us to offer online membership to those interested to become members of the IAE.
- The website is regularly maintained to keep it updated and current.
- Educational content, such as echo quiz, is being regularly added to the website.
- We believe that, in times to come, the website will become your 'one-stop destination' for any query related to IAE and its activities, in particular, and echocardiography in India, in general.



JIAE moves to a new platform

- Starting with the year 2017, The Journal of Indian Academy of Echocardiography and Cardiovascular Imaging (JIAE & CVI) has moved to Wolters-Kluwer Medknow platform.
- This makes the journal completely online with online system for manuscript submission, peer-review process and digital archiving.
- The first issue of the journal, in its new form, was released in April 2017. It was mailed to all members and was received well with good feedback. Those members who have not received their copy, please write to us since it could be an erroneous address which may have resulted in the failure of the issue reaching you.
- The next issue will be published in September 2017 which coincides with the annual IAE conference.
- Visit our website <http://www.jiaecho.org/> to read or download the latest articles as well as for manuscript submissions. Be it a topic article you want to write or an image you want to show or an interesting case you want to highlight or an original research study to be published, JIAE & CVI is an ideal platform to share your work.
- Look forward to your valuable comments, feedback and suggestions as we constantly strive to improve the quality of the journal.



The new executive committee has its first official meeting

- The current executive committee of the IAE had its first official meeting on 15th April 2017 at Gurgaon. The meeting was organized on the side-lines of the 'Medanta Echo n Cardiology 2017' meeting organized by Dr Ravi R Kasliwal, Past President, IAE.
- There was an excellent participation with 22 EC members attending the meeting.
- Several important administrative issues were discussed and roadmaps developed for addressing them over the next few months.
- Dr Rakesh Gupta and Dr (Col) S K Parashar updated all the members about the preparations for the forthcoming annual meeting of IAE- the [World Congress of Cardio Echo 2017](#)".
- The meeting also saw the launch of the 1st issue (Apr 2017) of the new-look JIAE as well as IAE Members' and Fellows' e-directories.



News from the Academy

Preparation for Echo India 2017 (World Congress of Cardio Echo 2017) in full swing



Unique conference amalgamation
of Cardioecho into Clinical Cardiology

XXIII World Congress of Clinical Cardiology, Echocardiography & Allied Imaging Techniques

& XXII Annual Conference of Indian Academy of Echocardiography (ECHO INDIA 2017)

Oct. 5 - 8, 2017 | Birla Institute of Scientific Research, Statue Circle, Jaipur, Rajasthan, India

ABSTRACT SUBMISSION

Submission closes on July 31st, 2017

REGISTER ONLINE

and avail highly discounted fee till June 30th, 2017

Dr (Col) Satish K Parashar
National President

Dr Rakesh Gupta
Secretary General

Organized By :
Academy of Echocardiography, Delhi & NCR chapter
Jaipur Branch of IAE

Cooperating Bodies:
American Society of Echocardiography
European Association of Cardiovascular Imaging
Asian-Pacific Association of Echocardiography
American Association of Cardiologists of Indian Origin

for more details, please visit

www.worldcongressofcardioecho2017.com

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• The XXII Annual meeting of the IAE (Echo India 2017) is being jointly organized with the XXIII World Congress of Clinical Cardiology, Echocardiography and Allied Imaging Techniques.

• **Highlights** of the meeting include-

• **Excellent International and National faculty** comprising of **several world leaders** in the field of echocardiography

• Pre-conference CME on topics of daily clinical relevance

• Hands-on learning sessions on TEE and TTE simulators

• Unique symposia on complex echocardiography issues such as diastology, pericardial diseases, strain imaging, stress echo, pericardial diseases, 3D echo, etc. by the masters in the respective fields

• Joint sessions with the ASE, EACVI, AAE

• Daily symposia on clinical cardiology

• Numerous sessions on interesting echo cases; case competitions including the much sought after 'Natesa G Pandian case study competition'; PG track session; etc.

• The ultimate, fun-filled, exciting echo quiz conducted by the quiz master from the ASE

• For more details and for registration, please visit the conference website
www.worldcongressofcardioecho2017.com

Fellowship of IAE, Accreditation, Case Competition Award Opportunities

IAE Accreditation

- IAE Accreditation is a certification of the requisite competence in the performance of echocardiography and adherence to the internationally accepted practice standards.
- Applications are invited for the **2017 IAE Accreditation test**, to be conducted during the forthcoming annual Echo India meeting ([World Congress of Cardio Echo 2017](http://WorldCongressofCardioEcho2017.com)) at Jaipur. The test will be conducted on 6th Oct 2017 between 2:00 pm - 4:00 pm and 4:00 pm - 6:00 pm.
- Please visit the IAE website for details about the application process and for downloading the application form. **The last date for submission of application is 5th Sept 2017.**

Fellowship of IAE

- Fellowship of IAE is a unique distinction recognizing the commitment and expertise in the field of echocardiography.
- As with every year, the **Fellowship of IAE** will be awarded during the forthcoming annual Echo India meeting ([World Congress of Cardio Echo 2017](http://WorldCongressofCardioEcho2017.com)) at Jaipur. Applications are invite for the same.
- All interested members are requested to visit the IAE website for details about the application process and for downloading the application form. **The last date for submission of application is 5th Sept 2017.**

Case Competition, Young Investigator Award

- The Annual meeting of IAE features several sessions on interesting cases/ original research including the "**Natesa G Pandian Case Competition**" and the "**Young Investigator Award session**".
- Applications are being invited for these sessions to be conducted during the forthcoming Echo India 2017 (World Congress of Cardio Echo 2017) at Jaipur.
- All interested members are requested to visit the conference website for details about the application process and for downloading the application form.

Answer to echo quiz: The CW spectral Doppler shows a late peaking systolic jet away from the LV apex followed by a brief high-velocity jet towards LV apex just near end-systole and then MV inflow during diastole. This is because of mid-LV cavity obstruction during systole resulting in late peaking forward systolic jet. Onset of myocardial relaxation towards end-systole causes a brief flow of blood from LV base to apex due to entrapment of blood at LV base. This can be corroborated on color M-mode which shows blue color jet during systole with turbulence towards late systole and then a brief flow towards LV apex originating at mid-LV level (note the distance from the PHV shadows and compare it with the mitral inflow during diastole). The gray-scale image shows mid-LV narrowing at end-systole.

News from the Local Chapters

Delhi NCR Chapter

- Annual meeting of Delhi-NCR chapter of IAE was held on 7th May 2017 at India Habitat centre, New Delhi from 9 am to 6 pm.
- It was a well attended meeting with more than 100 delegates from Delhi-NCR.
- There was a rich faculty from Delhi-NCR region, including Dr (Col) SK Parashar, Dr Rakesh Gupta, Dr Sanjay Mittal, Dr J C Mohan, Dr Vivek Tandon, Dr Ashok Omar, Dr K K Kapoor, Dr Simmi Manocha, etc.
- The meeting was case-based and a lot of young doctors shared their interesting cases. There was also a clinical-echo session on advances in heart failure.



West Bengal Chapter

- The West Bengal Academy of Echocardiography (WBAE), the West Bengal chapter of IAE, held its annual conference EZECHO 2017 this year between 26th to 28th May 2017. Being the 10th year of WBAE, the conference was organized in the most befitting manner.
- The scientific program devised by Dr Arunangshu Ganguly, Chairman, Scientific Committee, had several 'firsts'-
 - The Pre-conference workshop showcased echo-guided interventions, the first time ever done in EZECHO.
 - Instead of didactic sessions, all sessions were made as 'Focused Sessions' with interesting case-based interaction between the moderator, panelists and the audience.
 - There was an interesting CD presentation competition with attractive prize, echo-quiz, Master teaching sessions.
 - A new session -'Make in India', to showcase original research work done in India on echocardiography.
 - A webinar was presented by Dr Y Chandrashekhar from USA.
- The very prestigious WBAE National President's Oration was bestowed upon Dr H K Chopra, the current President of IAE and this session was chaired by Dr Amal K Banerjee and Dr Santanu Guha- the Past Presidents of CSI.
- 'Bangla-Echo Consortium' was launched to facilitate a common platform between the two neighboring countries for interaction on echocardiography.
- To top it all, a book titled 'Clinico-Echo Ensemble' was published to commemorate the 10th year of WBAE which was edited by Dr Soumitra Kumar with contributions from the eminent Cardiologists of West Bengal.

Jaipur Chapter

- Clinical echo meeting of IAE Jaipur branch was conducted on 17th may 2017.
- Interesting case study of "right atrial myxoma with coronary artery disease" was presented by Dr Ashok garg, among other topics.
- The meeting was attended by 50 doctors of the city including cardiologists & physicians.
- A simulator-based TEE workshop was also conducted on April 22-23, 2017 at the Eternal Heart Care Centre auditorium.



Karnataka Chapter

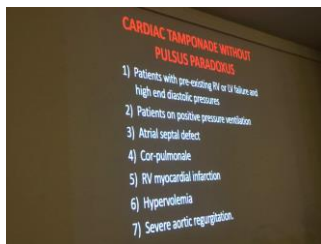
- The IAE Karnataka conducted a meeting in Mysore on the 19th March 2017, in conjunction with the CSI Mysore chapter.
- The meeting was very successful, with around 80 members participating in the meeting.
- In addition, the IAE Karnataka Chapter also conducted its monthly member's meet on the 2nd April in Bangalore.
- This half day meet was attended by 70 delegates.



News from the Local Chapters

Madurai Chapter

- IAE Madurai chapter conducted a CME on 1st April 2017 discussing role of strain imaging in STEMI as well as interesting case studies.
- Another CME was conducted on 3rd June 2017. Dr G Vijayaraghavan presented a talk on Echo-Doppler studies in cardiac tamponade.
- A simulator-based TEE workshop was also conducted on 10th June 2017.



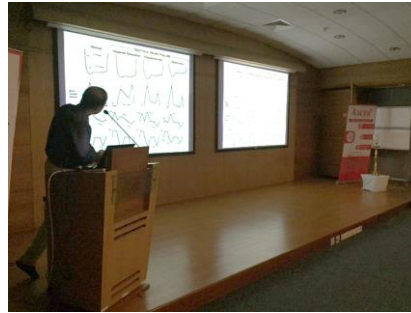
Chennai Chapter

- 2nd academic meet of IAE, Chennai Chapter was held on Saturday 18th February 2017.



Mumbai Chapter

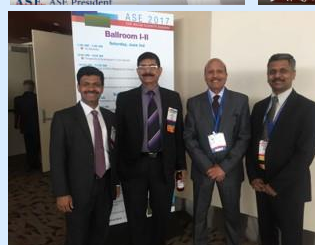
- Mumbai chapter has been regularly conducting quarterly meetings.
- The last two echo-clinical meets were organized in the auditorium of Hinduja hospital and the Holy family hospital. Next meeting is scheduled for July 2017 in the Jupiter hospital auditorium.
- The meetings have attracted very regular attendance with average attendance being 90 to 100.
- Each meeting consists of a theme lecture by a senior faculty and 10-12 interesting presentations, all by young echocardiographers.



News from Our International Partners

American Society of Echocardiography

- The [American Society of Echocardiography \(ASE\)](#) recently organized its **28th Annual Scientific Sessions** from 2-6 June 2017 at Baltimore, Maryland, USA.
- The meeting was a tremendous success with more than 2200 delegates from 58 countries attending it. [Watch the video highlights here.](#)
- The meeting also saw election of the new office-bearers of the ASE. Dr Vera Rigolin is the new President while Dr Jonathan Lindner and Dr Madhav Swaminathan are the new President-Elect and Vice President respectively. [Click here](#) for more details.
- IAE was represented at the meeting by Dr Ravi R Kasliwal and Dr J C Mohan (Past Presidents), Dr Manish Bansal (Hon Gen Secy), Dr Shantanu P Sengupta (Joint Secretary) and Dr Vinayak Agrawal.
- IAE has strong association with ASE for many years. Several ASE leaders are set to participate in the forthcoming annual meeting of IAE at Jaipur in October 2017.



New Science- From Around the World

Guidelines Watch

IAE Performance Standards and Recommendations for a Comprehensive Transthoracic Echocardiographic Study in Adults.

Burkule N, et al. *J Indian Acad Echocardiogr Cardiovasc Imaging* 2017;1:1-17.
<http://www.jiaecho.org/article.asp?issn=WKMP-0155;year=2017;volume=1;issue=1;spage=1;epage=17;aulast=Burkule>

The Clinical Use of Stress Echocardiography in Non-Ischaemic Heart Disease: Recommendations from the European Association of Cardiovascular Imaging and the American Society of Echocardiography

Lancellotti P, Pellikka PA, Budts W, et al. *J Am Soc Echocardiogr* 2017;30:101-38
<http://asecho.org/wordpress/wp-content/uploads/2017/01/3D-Echo-in-CHD.pdf>

Recommendations on the Echocardiographic Assessment of Aortic Valve Stenosis: A Focused Update from the European Association of Cardiovascular Imaging and the American Society of Echocardiography.

Baumgartner H, Hung J, Bermejo J, et al. *J Am Soc Echocardiogr* 2017;30:372-92
<http://asecho.org/wordpress/wp-content/uploads/2017/04/2017ValveStenosisGuideline.pdf>

Recommendations for Noninvasive Evaluation of Native Valvular Regurgitation: A Report from the American Society of Echocardiography Developed in Collaboration with the Society for Cardiovascular Magnetic Resonance.

Zoghbi WA, Adams D, Bonow RO, et al. *J Am Soc Echocardiogr* 2017;30:303-71
<http://asecho.org/wordpress/wp-content/uploads/2017/04/2017ValvularRegurgitationGuideline.pdf>

Multimodality imaging in restrictive cardiomyopathies: an EACVI expert consensus document: In collaboration with the 'Working Group on myocardial and pericardial diseases' of the European Society of Cardiology Endorsed by the Indian Academy of Echocardiography

Habib G, Bucciarelli-Ducci C, Caforio ALP, et al. *European Heart Journal Cardiovascular Imaging* (2017) doi:10.1093/ehjci/jex034
<https://academic.oup.com/ehjci/article-abstract/doi/10.1093/ehjci/jex034/3828464/Multimodality-imaging-in-restrictive?redirectedFrom=fulltext>

[More guidelines from the IAE](#)

[More guidelines from the ASE](#)

[More guidelines from the EACVI](#)

Good Reviews

A test in context: myocardial strain measured by speckle-tracking echocardiography

Patrick Collier, Dermot Phelan, Allan Klein. *J Am Coll Cardiol* 2017;69:1043-56.
<http://www.onlinejacc.org/content/69/8/1043>

Cardiac imaging for assessing low-gradient severe aortic stenosis

Marie-Annick Clavel, Ian G. Burwash, Philippe Pibarot. *J Am Coll Cardiol Img* 2017;10:185-202.
<http://www.imaging.onlinejacc.org/content/10/2/185>

Expert review on the prognostic role of echocardiography after acute myocardial infarction

Prastaro M, Pirozzi E, Gaibazzi N, et al. *J Am Soc Echocardiogr* 2017;30:431-43
[http://www.onlinejase.com/article/S0894-7317\(17\)30050-0/fulltext](http://www.onlinejase.com/article/S0894-7317(17)30050-0/fulltext)

Safety with echocardiographic contrast agents.

Muskula PR, Main ML. *Circ Cardiovasc Imaging*. 2017;10:e005459. DOI: 10.1161/CIRCIMAGING.116.005459

<http://circimaging.ahajournals.org/content/10/4/e005459>

Imaging to diagnose and manage patients in heart failure with reduced ejection fraction.

Nagueh SF, Chang SM, Nabi F, Shah DJ, Estep JD. *Circ Cardiovasc Imaging*. 2017;10:e005615. DOI: 10.1161/CIRCIMAGING.116.005615
<http://circimaging.ahajournals.org/content/10/4/e005615>

Tricuspid regurgitation diagnosis and treatment.

Arsalan M, Walther T, Smith II RL, Grayburn PA. *European Heart Journal* 2017;38:634-638
<https://academic.oup.com/eurheartj/article/38/9/634/3056886/Tricuspid-regurgitation-diagnosis-and-treatment>

Transoesophageal echocardiography: what the general cardiologist needs to know.

Wamil M, Newton JD, Rana BS, Bull S. *Heart* 2017;103:629-640.
<http://heart.bmj.com/content/103/8/629>

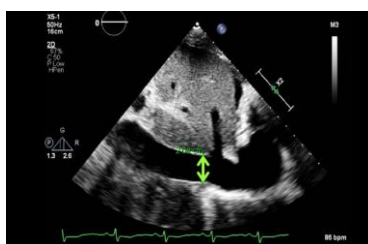
Basics Revisited: Estimation of right atrial pressure

Dr Rahul Mehrotra, Treasurer, IAE

• During echocardiography, RA pressure is most commonly estimated by evaluating IVC diameter and the presence of inspiratory collapse.

• **How to evaluate-**

- The IVC should be examined in **supine** position, in **sub-costal** window.
- The size of the IVC is to be measured **perpendicular** to its long axis, in **end-expiration**, just **proximal** to the drainage of hepatic veins in the abdomen. The measurement can be made in 2D or M-mode.



- The change in IVC size should be evaluated during sniff and also during quiet respiration avoiding translatory motion of IVC which results in erroneous measurements.

• **Interpretation-**

IVC size (mm)	IVC Collapse on sniff	Mean RAP (mmHg)
≤21 mm	>50%	3 (0-5)
≤21 mm	<50%	8 (5-10)*
>21 mm	>50%	8 (5-10)*
>21 mm	<50%	15 (10-20)

* In intermediate cases, secondary indices of elevated RA pressure should be considered to refine the assessment. These include- dilated right atrium, bowing of inter-atrial septum to left side throughout the cardiac cycle, restrictive tricuspid inflow pattern, tricuspid E/E' ratio >6, hepatic vein flow pattern (discussed below).

• **Salient points-**

- Exact values rather than ranges should be used to maintain uniformity in reporting.
- In supine position, the IVC may appear dilated in normal young athletes and in some normal adults; should cross-check in left lateral position.
- For those patients who cannot perform sniff, a collapse of <20% in quiet respiration suggests elevated RA pressure.
- Above method is not applicable for patients on positive pressure ventilation. Following are useful in them-
 - If the IVC size is <1.2 cm, RA pressure is likely to be <10 mmHg, while a small and collapsed IVC suggests hypovolemic state.
 - Hepatic vein systolic filling fraction [(Systolic velocity / (Systolic velocity + diastolic velocity)) <55% is one of the most sensitive and specific markers of elevated RA pressure is applicable even in patients on ventilatory support.
 - IVC diameter measured on TEE at the cavoatrial junction is also helpful.

Responsibilities of EC Members IAE 2016-17

- | | |
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| 4. Chairman, International IAE Affairs and Scientific Advisory Committee | Dr S K Parashar |
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| 16. Chairman, IAE Chapters Coordination and Report Advisory Committee | |
| 17. Chairman, Legal Ethical Advisory committee | |
| 18. Chairman, Public Relation & Fund Raising Advisory Committee | |
| 19. Treasurer and Fund Raising Coordinator | |
| 20. Hon. Editor, JIAE & CVI
Coordinator, International Alliances- EACVI | |
| 21. Editor, IAE Members e-Directory, IAE Fellows e-Directory | Dr Hansa Gupta |
| 22. Joint Editor, IAE e-Newsletter | Dr C K Ponde |
| 23. Co-Chair, IAE Website Advisory Committee | Dr Shantanu Sengupta |
| 24. IAE Corporate Membership Drive Advisory Committee Coordinators | Dr C K Ponde
Dr Ashok Garg
Dr Sanjay Mehrotra
Dr Atul Karande
Dr Srikanth Sola
Dr G Gnanavelu
Dr Rohit Tandon
Dr Aniruddha De
Dr Kudel Kunhali
Dr H K Chopra (President)
Dr S Shanmugasundaram (President-Elect)
Dr V Amuthan (Immediate Past President)
Dr Rakesh Gupta (Past President)
Dr Manish Bansal (Hon. Gen. Secretary) |
| 25. IAE Membership Drive Advisory Committee Coordinators | |
| 26. Accolades and Awards Advisory Committee | |

Upcoming Events

Echo India 2017 (World Congress of Cardio Echo 2017)

World Congress of Cardio Echo 2017

5th- 8th Oct 2017; Jaipur, India

www.worldcongressofcardioecho2017.com

Please turn to [page 3](#) for more details.

Other Meetings in India

XIII Advanced Skills Training Workshop

12th-15th August 2017, New Delhi, India

www.echocourse.in

ECHONAGPUR 2017

11th -13th August 2017, Nagpur, India

www.echonagpur.com

World Congress on Clinical Preventive Cardiology and Imaging (WCCPCI 2017)

29th Sept-1st Oct 2017, Amritsar, India

www.wccpci2017.com

Annual conference of the Karnataka chapter of IAE

Nov 2017, final date yet to be decided

Visit the website www.iaekarnataka.org for more details

69th Annual Conference of Cardiological Society of India

30th Nov – 3rd Dec, 2017, Kolkata, India

<http://csicon2017.org>

International Meetings

ESC Congress 2017

26th – 30th August 2017, Barcelona, Spain

<http://www.escardio.org/Congresses-%26-Events/ESC-Congress>

4th World Summit on Echocardiography

5th- 7th Oct 2017, Rio de Janeiro, Brazil

<http://www.asecho.org>

American Heart Association Scientific Sessions 2017

11th – 15th Nov 2017, Anaheim, California, USA

http://professional.heart.org/professional/EducationMeetings/MeetingsLiveCME/ScientificSessions/UCM_316900_Scientific-Sessions.jsp

EuroEcho-Imaging 2017

6th – 9th Dec 2017, Lisbon, Portugal

<https://www.escardio.org/EACVI>

ACC.18, 67th Annual Scientific Sessions of the American College of Cardiology

10th - 12th Mar 2018, Orlando, USA

<https://accscientificsession.acc.org/>

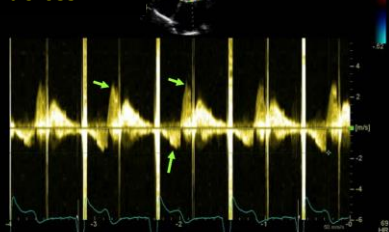
Ongoing Activities

- **IAE activities on digital platform-** Efforts are underway to bring IAE academic activities on digital platform in the form of conference proceedings, video lectures, short tutorials, etc. apart from utilizing social media tools for furthering echo education in India.

- **The first, state-of-the-art IAE book- "Essentials of Echocardiography"**- being published under the editorship of **Dr V Amuthan and Dr (Col) S K Parashar**, Past Presidents, IAE, is scheduled to be released during Echo India 2017.

Echo quiz

AP4C-CW across MV



- These images are from a patient with a metallic prosthetic valve in mitral position.

- Describe the flow pattern and its mechanism in the continuous-wave spectral Doppler shown on the left side.

- For answer, turn to [page 3](#).

AP4C-Color m-mode across MV

