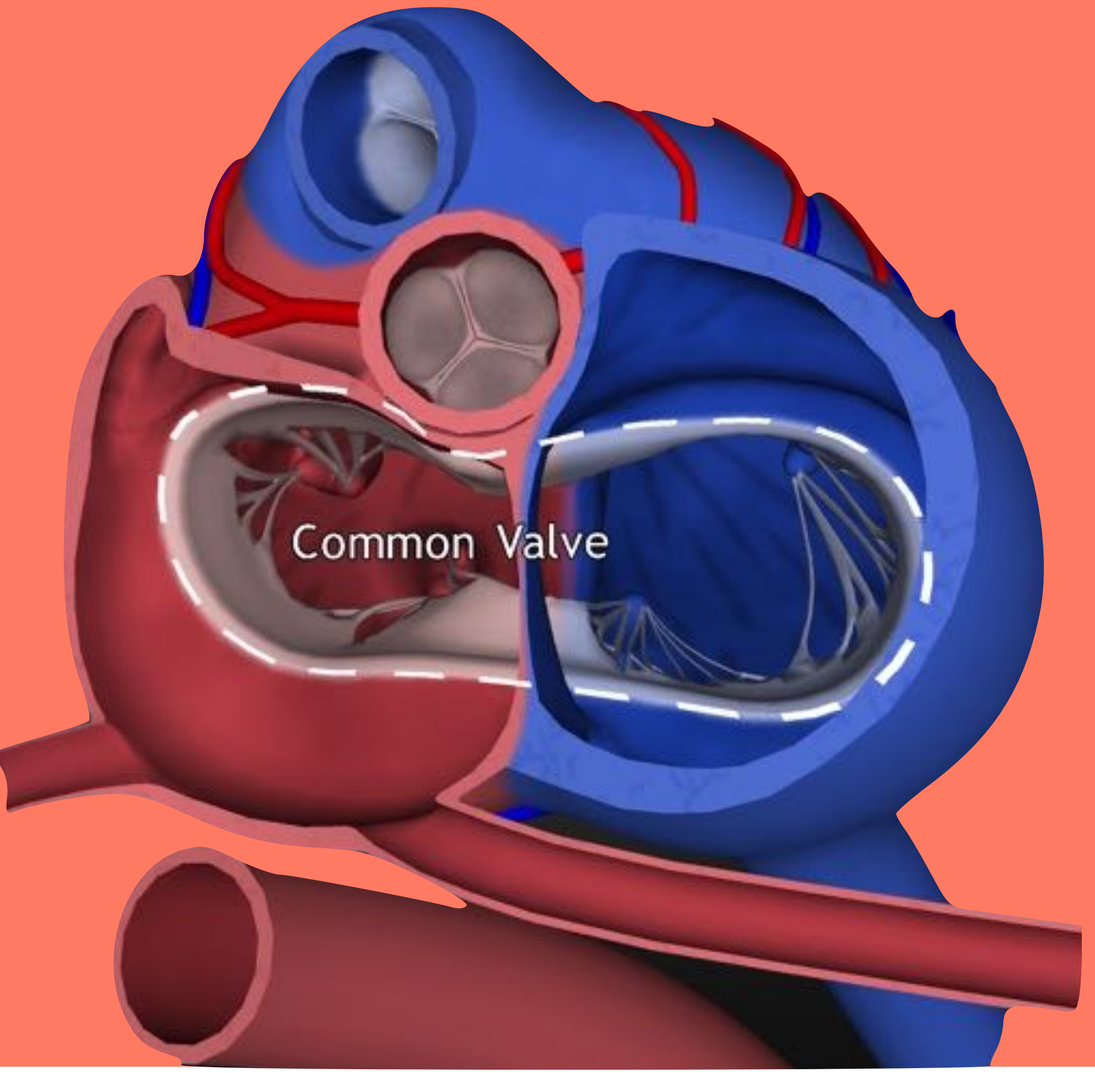

Atrioventricular septal defects

Dare I say it is not OK

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cardiogen
Filière nationale de santé maladies cardiaques héréditaires
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European Reference Network
for rare or low prevalence complex diseases
Network Respiratory Diseases (ERN-LUNG)
European Reference Network
for rare or low prevalence complex diseases
Network Heart Diseases (ERN GUARD-HEART)

What is the difference between **Dare I say** and **I dare say** ?

"I dare say" is a statement, and it can be a complete sentence.

« I dare say that if I had read the invitation for this meeting correctly, I would have declined to give this talk».


Dare he say my title
is not OK ?

What is the difference between **Dare I say** and **I dare say** ?

"Dare I say" is a question and needs more context.

Surgeon before entering the OR - Do you think closing the cleft is a bad idea?
Cardiologist on his way to swimming pool - I dare say!
It means Yes, 100%, totally. It's OK but sounds old-fashioned and British.

You could also say:
Surgeon before entering the OR - What do you think of closing the cleft ?
Cardiologist on his way for a coffee break after morning round- Well, I dare say it is the worst decision you can take in the OR today.

The other one:
Cardiologist who interrupted lunch with the dean to look at TEE loops - Dare I say that closing the cleft was a bad idea?
Surgeon (who just asked before entering the OR to be polite) - No, you'd better dare not say that before having seen the valve function when the anesthesiologist will have correctly (if I dare) managed preload and LV function.

My senior surgeons

Re-repair after primary AVSD surgery (1)

Proportion of reinterventions on Left AVV~15% of patients require future left atrioventricular valve (LAVV) repair

3 to 5% reoperations for subaortic obstruction

5% pace-maker implantation

anecdotical reoperations for RAVV dysfunction

Burden of reoperations

LAVV repair in 85% of cases during 1st reoperation

A third of LAVV repair will require a re-repair

LAVV replacement in ~40% during 2nd reoperation

Bové T, et al. Surgical repair of atrioventricular septal defects: incidence and mode of failure of the left atrioventricular valve. Interact Cardiovasc Thorac Surg. 2018;27(1):42-47.
Gellis L, et al. Left atrioventricular valve repair after primary atrioventricular canal surgery: Predictors of durability. J Thorac Cardiovasc Surg. 2023;166(4):1168-1177.

Re-repair after primary AVSD surgery (2)

Causes for reinterventions after AVSD repair

-unintentional technical inadequacy

-remnant morphological LAVV anomalies that remained untouched or unrecognized at the time of the primary repair

Prevention of residual lesion

-optimizing repair in « classical forms »

-increased attention for additional anatomical features of the LAVV at the time of primary repair

Bové T, et al. Surgical repair of atrioventricular septal defects: incidence and mode of failure of the left atrioventricular valve. Interact Cardiovasc Thorac Surg. 2018;27(1):42-47.

Risk factors for reintervention or suboptimal results

Reinterventions

- absence of trisomy 21,
- significant preoperative LAVV regurgitation,
- more-than-moderate residual postoperative LAVVR,
- absent or incomplete cleft closure
- severely dysplastic or double-orifice LAVV.

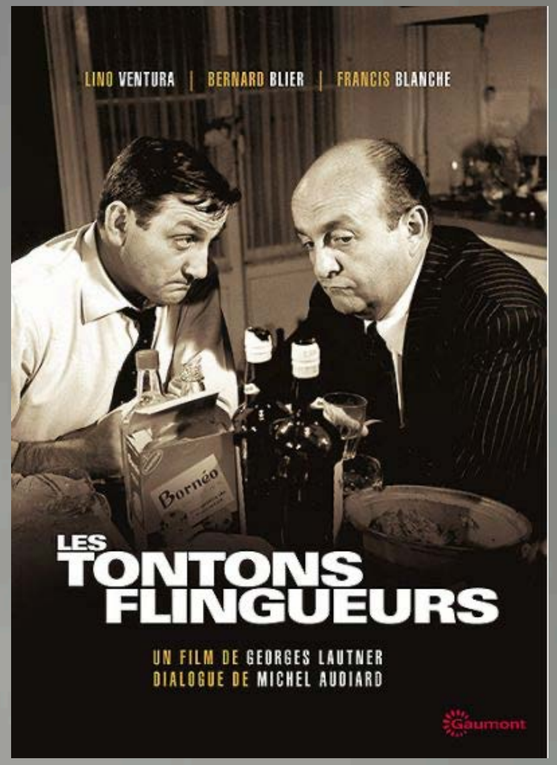
Anticipated suboptimal results

- Impossibility to completely close the cleft
- Aberrant subvalvular apparatus
- Double-orifice LAVV or dysplastic leaflets
- Asymmetric superior bridging leaflet
- Additional cleft

Michielon G, et al. Left atrioventricular valve incompetence after repair of common atrioventricular canal defects. Ann Thorac Surg 1995;60:S604–9.
Murashita T, et al. Left atrioventricular valve regurgitation after repair of incomplete atrioventricular septal defect. Ann Thorac Surg 2004;77:2157–62.
Minich LL, et al. Partial and transitional atrioventricular septal defect outcomes. Ann Thorac Surg 2010;89:530–6.
Hoohenkerk GJ, et al. Results of surgical repair of atrioventricular septal defect with double-orifice left atrioventricular valve. J Thorac Cardiovasc Surg 2009;138:1167–71.

Do you need to know to decide ?

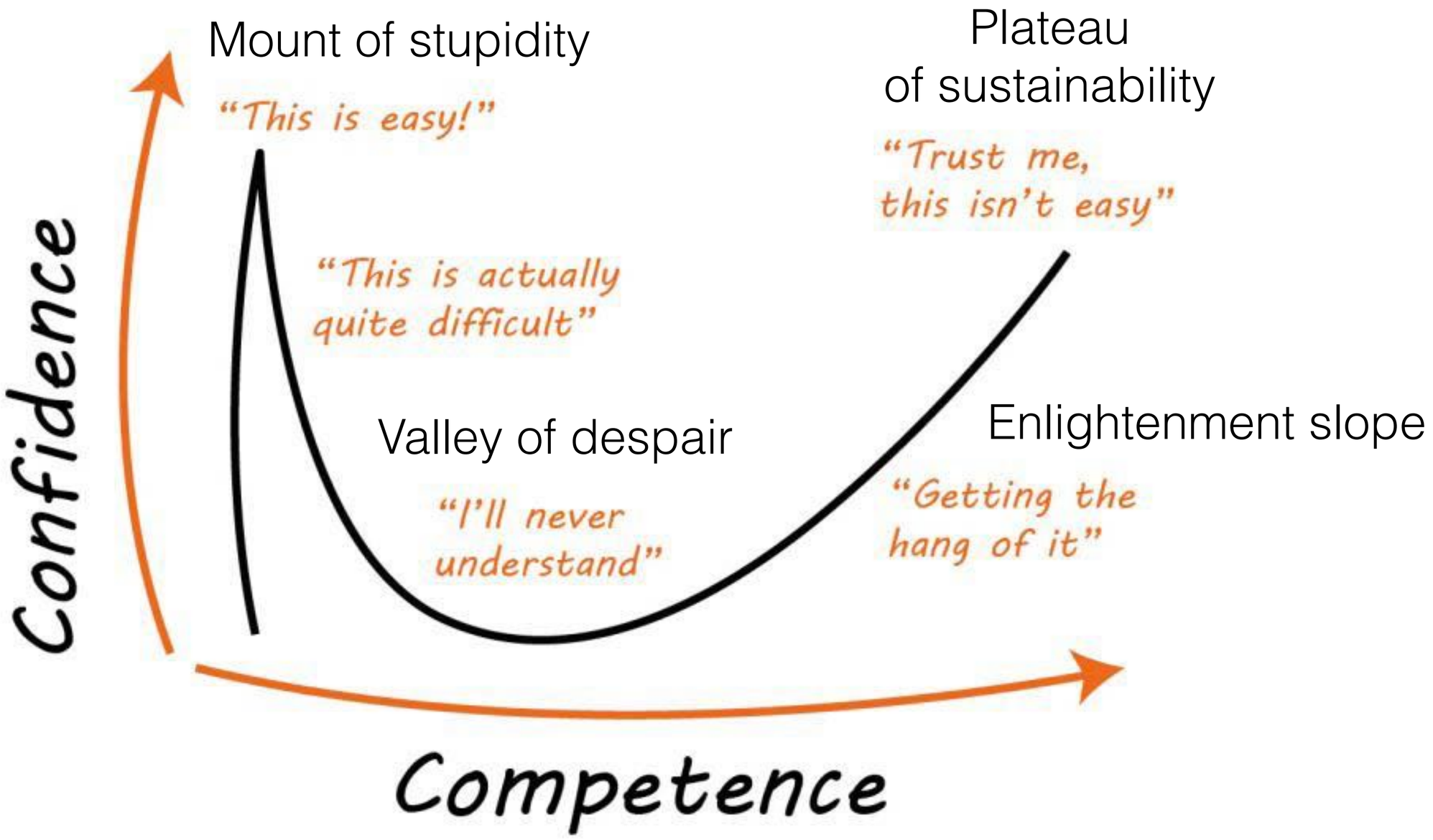
The more you know, the more you dare®



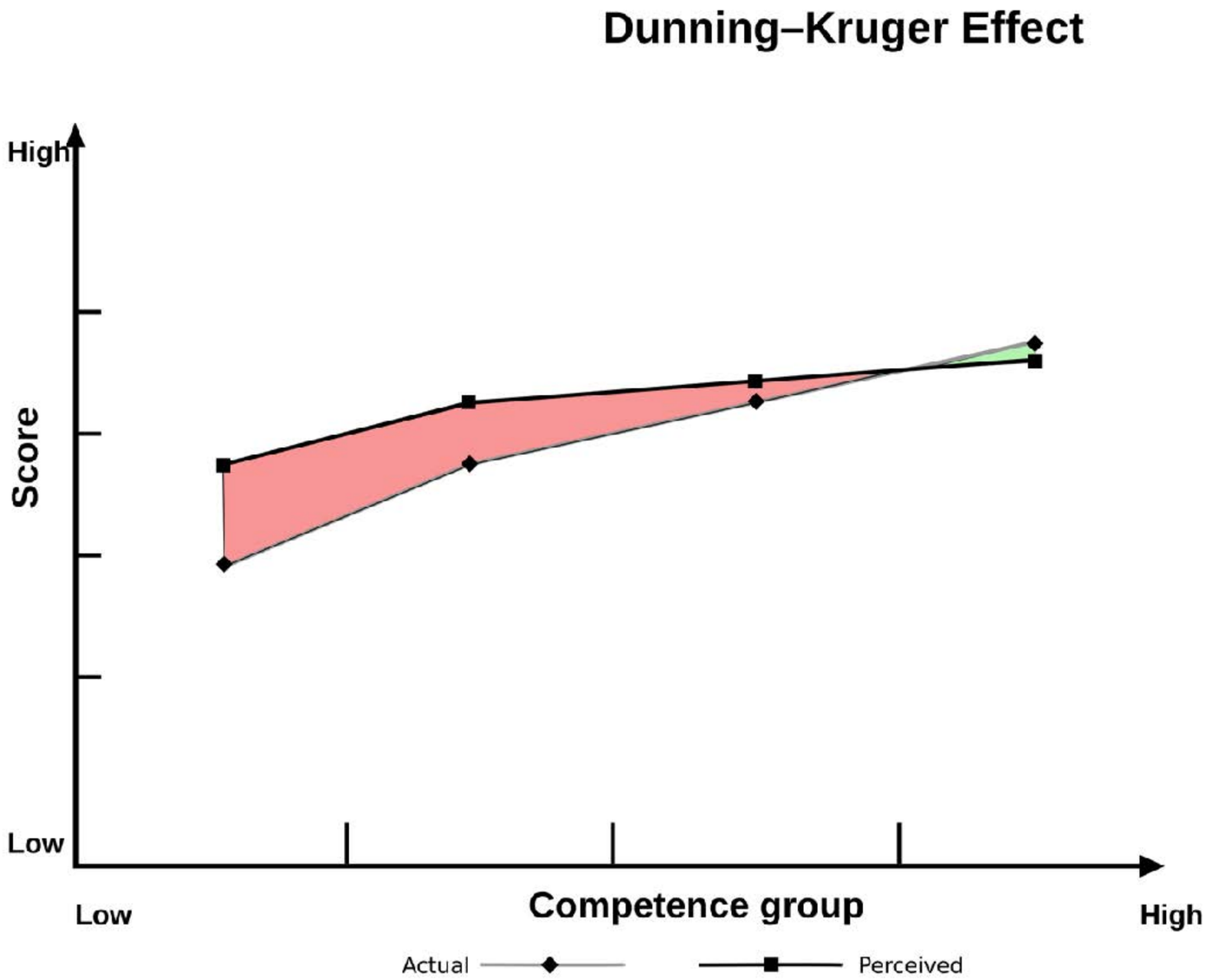
Idiots dare everything and it’s it their main phenotypic trait

Donald Trump is bolder than many doctors

President Donald Trump took to the White House briefing room and encouraged his top health officials **to study the injection of bleach into the human body as a means of fighting Covid.** *It was a watershed moment, soon to become iconic in the annals of presidential briefings. It arguably changed the course of political history.*



Dunning-Kruger effect is that you can realize that you are not competent enough only after having acquired competency for the task



Relation between average self-perceived performance and average actual performance on a college exam.

[1] The red area shows the tendency of low performers to overestimate their abilities.

Nevertheless, low performers' self-assessment is lower than that of high performers.

A person's intelligence is measured by the amount of uncertainty he/she is able to withstand. *Emmanuel Kant*

Trust is necessary

« You can do better ».

Believing that it can be better is to predict that the result will be better and this should be related to shared knowledge.

The diagnosis and the decision should converge to the final idea that the result will be OK.
It should also be attractive or feasible.

But evaluating the risk is a problem here: we always overestimate the risk associated with our actions compared to the risk of our non action.

Trust & Procrastination

When it is not OK, we know that what will happen after going back on pump will depend on what will be done by the surgeon.

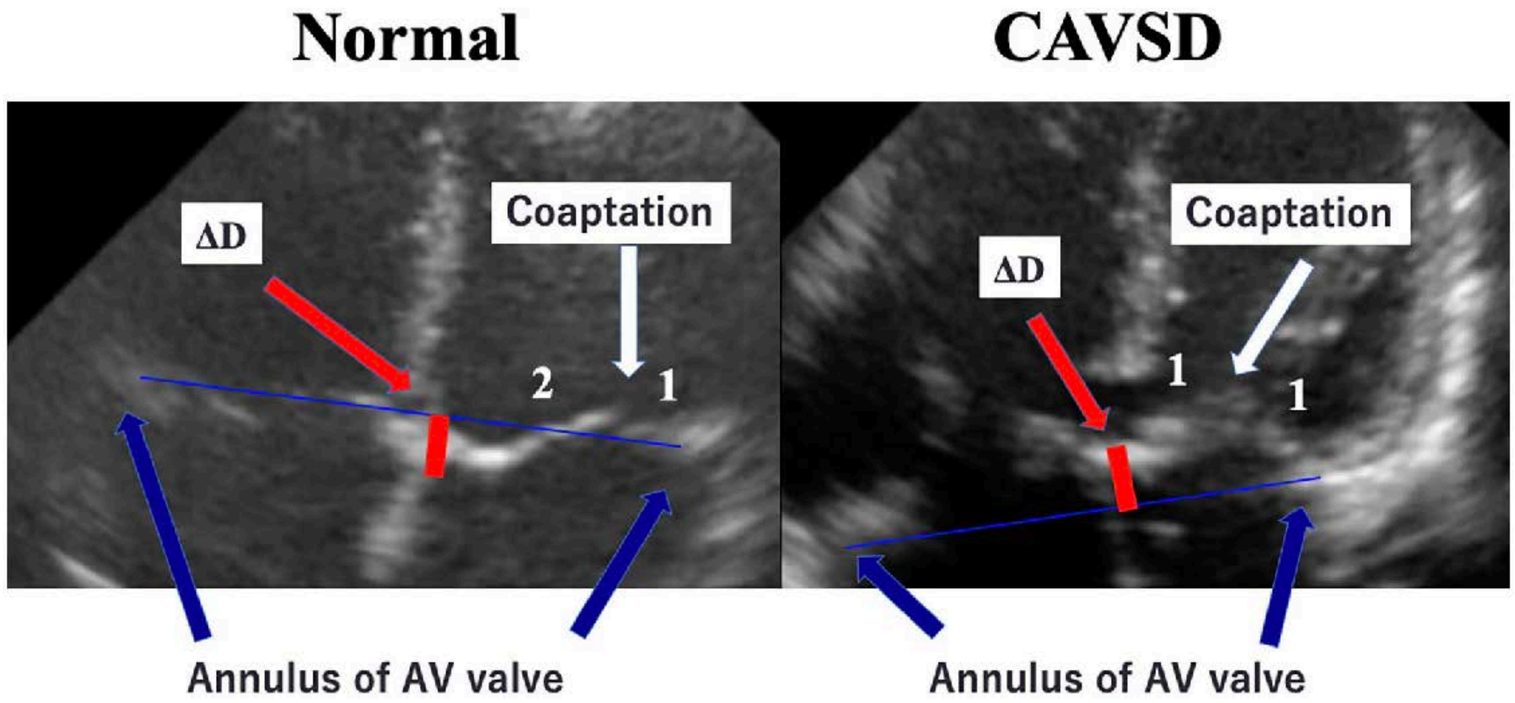
As we do no know (and he neither) what he will do, we cannot know what will happen.

Then, we wait to see what happens by doing nothing to be able to decide to do something that may have unexpected consequences ….

Is there a little bit of knowledge ?

Mechanisms of coaptation after repair

- the role of the bridging leaflets is minimal
- the size of the mural leaflet and papillary muscle position is controversial
- displacement to the apex of the coaptation point is debated…

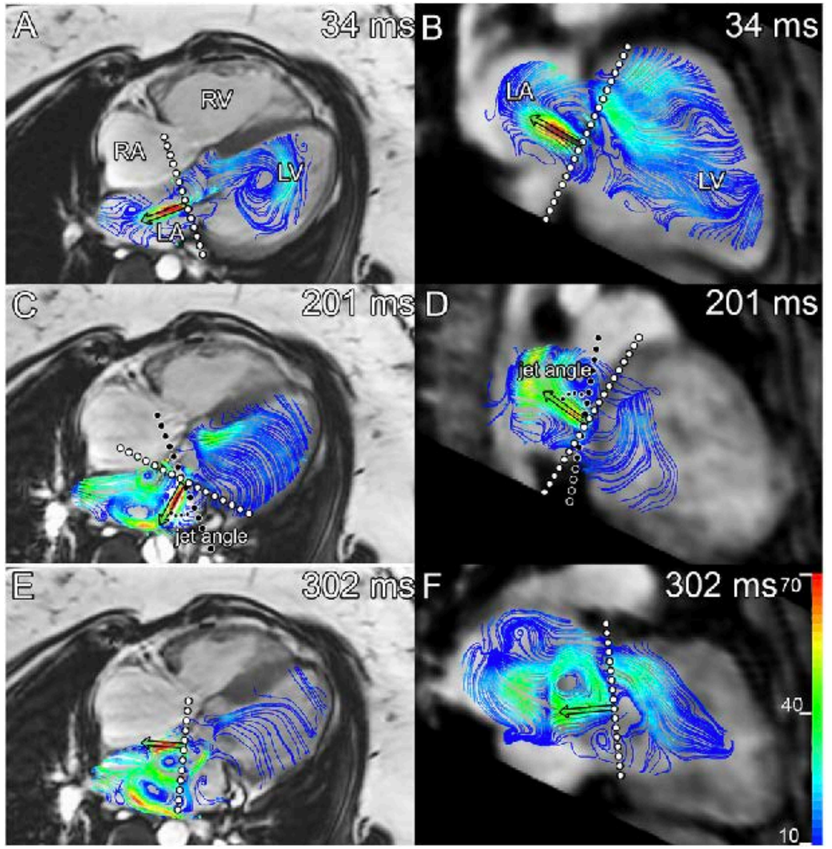


Kinami H et al. Clinical Medicine Insights: Pediatrics 2022

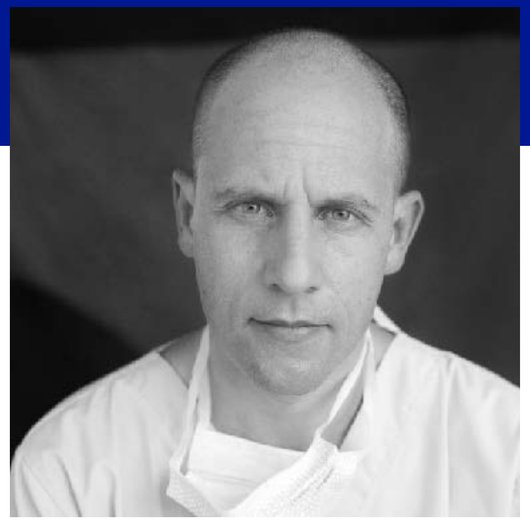
Is there a little bit of knowledge ?

Limitations of qualitative and quantitative assessment of LAVV with echocardiography

- multiple, dynamic and eccentric regurgitant jets
- non-circular cross-sectional shape …



Calkoen et al. Journal of Cardiovascular Magnetic Resonance 2015; 17:18

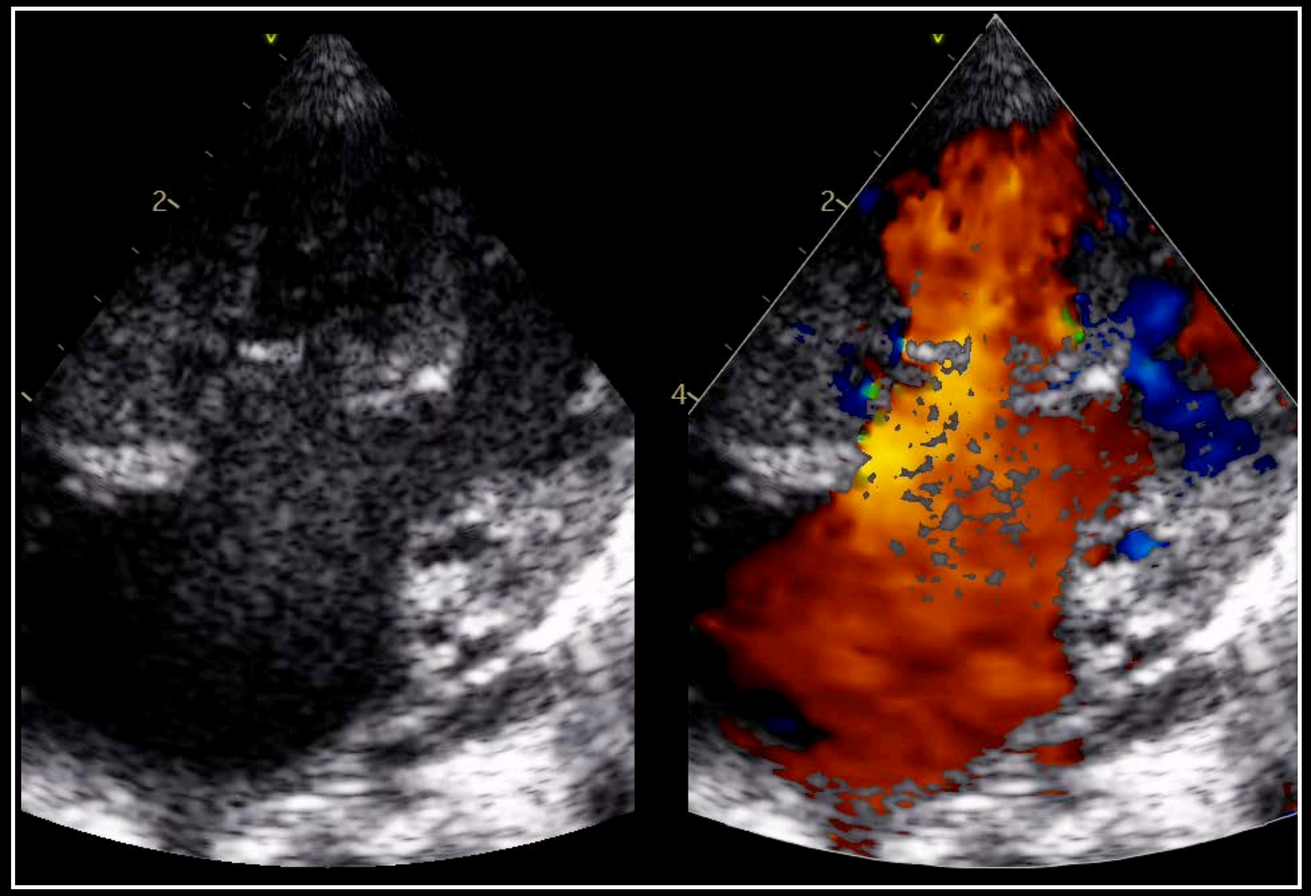


When I dare say it is not OK ?

1-Data in advance
2-Tactical scheme and organization
3-Follow the predefined procedure
4-Anticipate adverse events and adapt to unexpected findings

When is it easy to dare say it is not OK ?

1-« good » ventricles functions -Discuss
2-**VSDs**
  -small close to the patch (aortic or posterior) NO
  -somewhere else or with high right ventricular pressure YES
3-**Subaortic obstruction**
  -related to chordae in the LVOTO -YES
  -related to VSD patch - Difficult
4-**AV Block** - NO
5-**RAVV insufficiency high grade** - Discuss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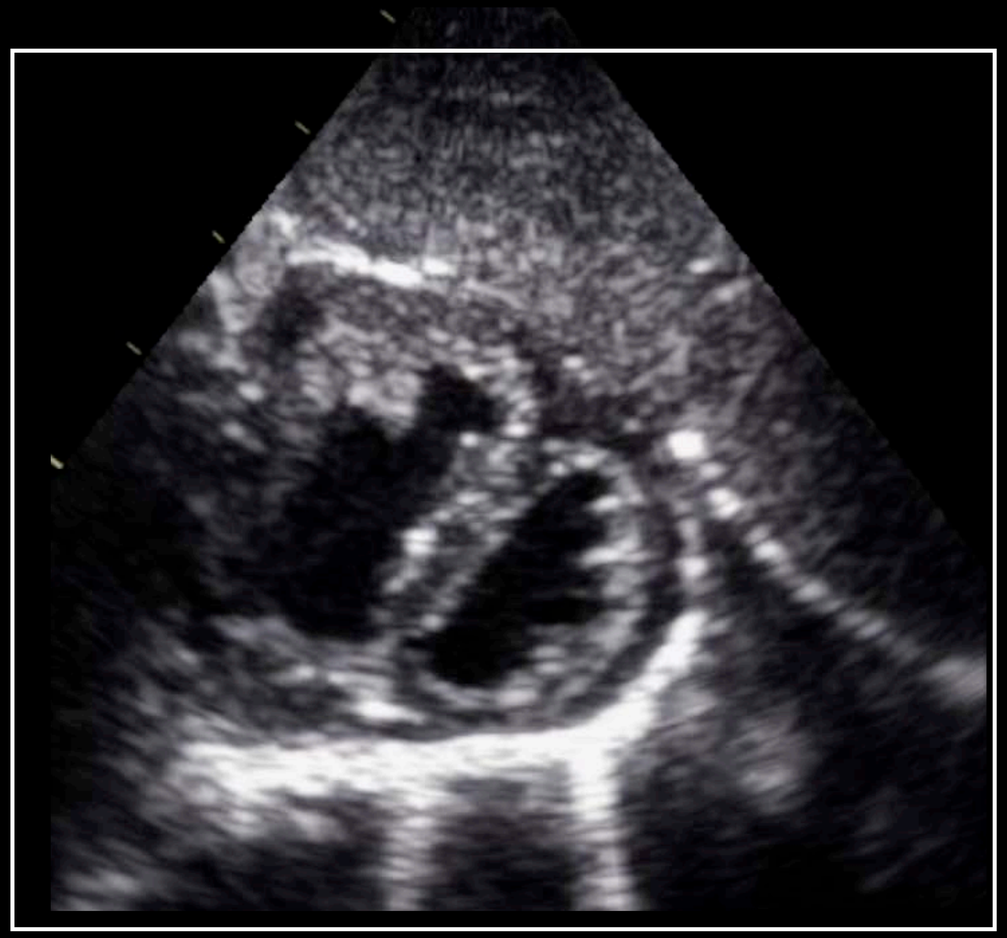
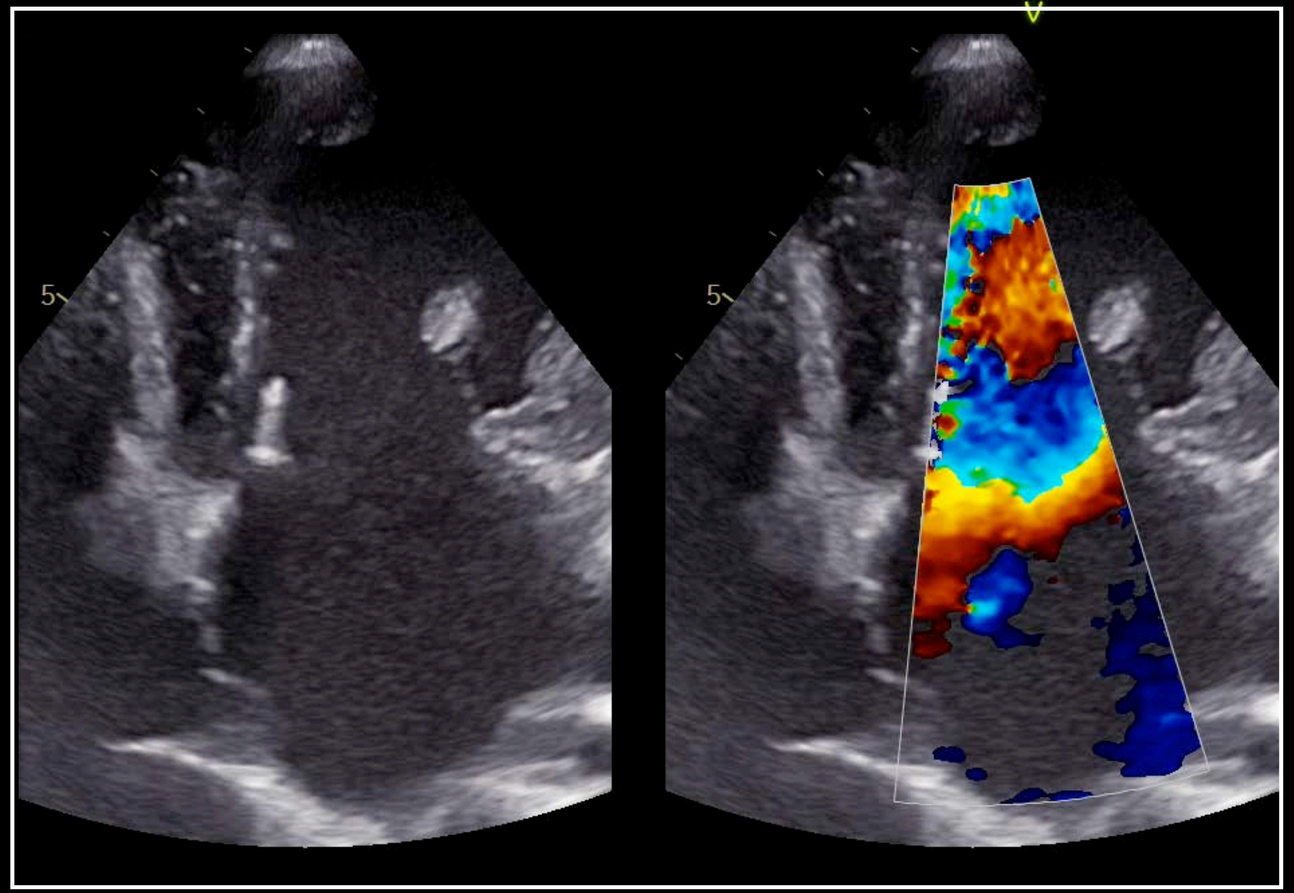
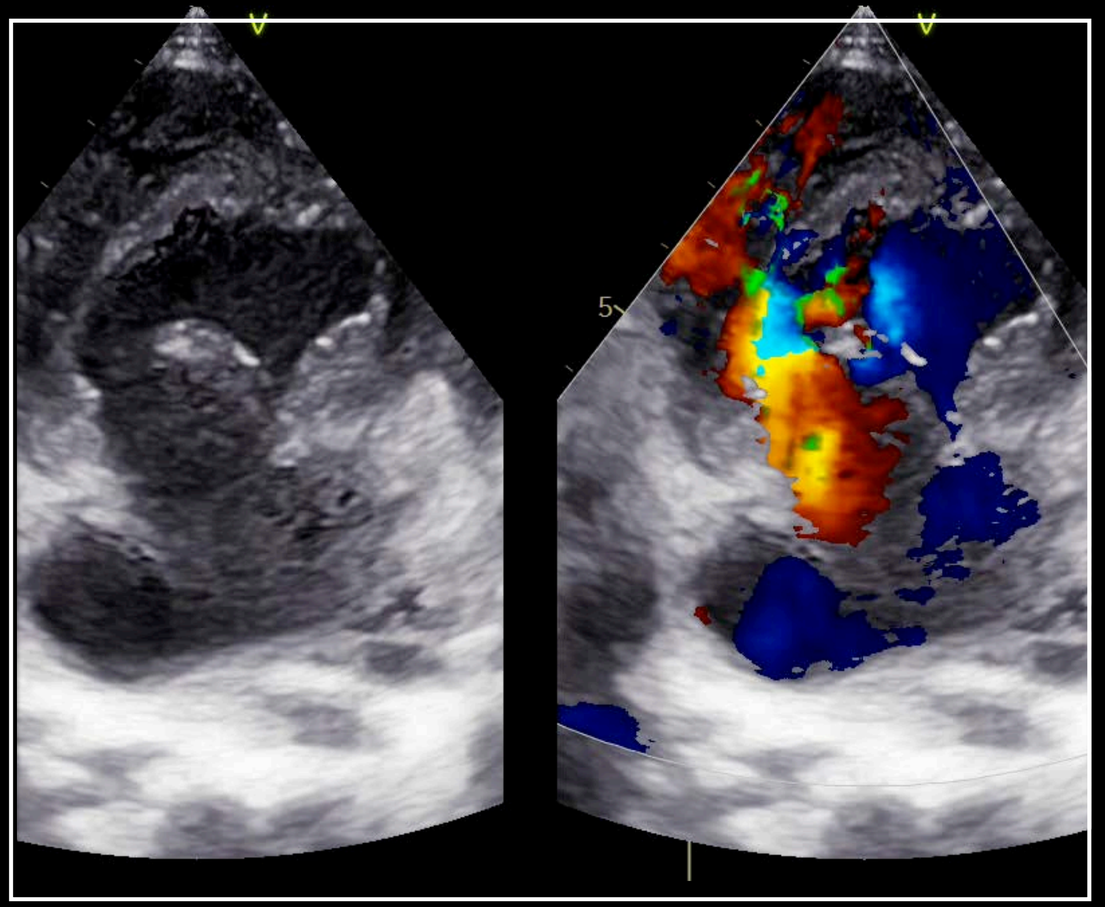
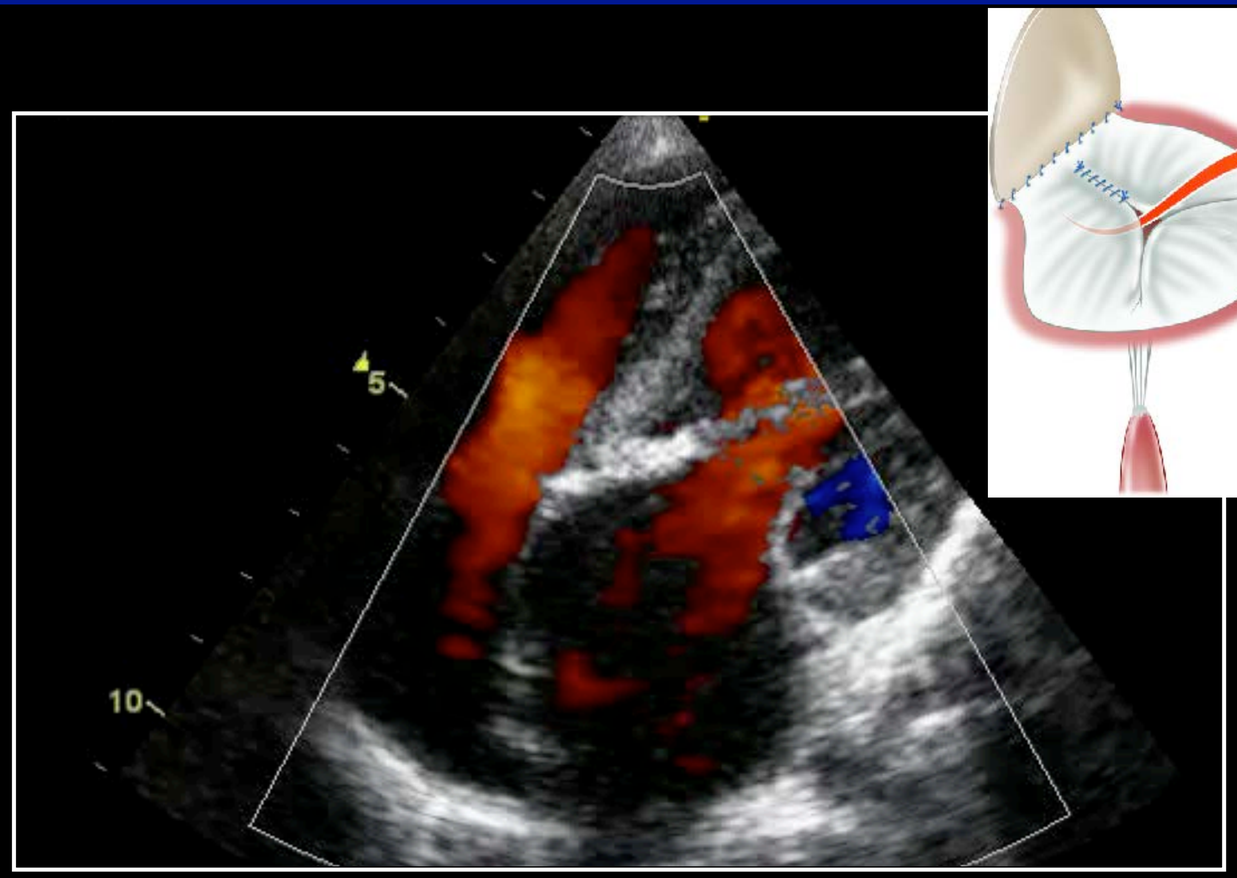
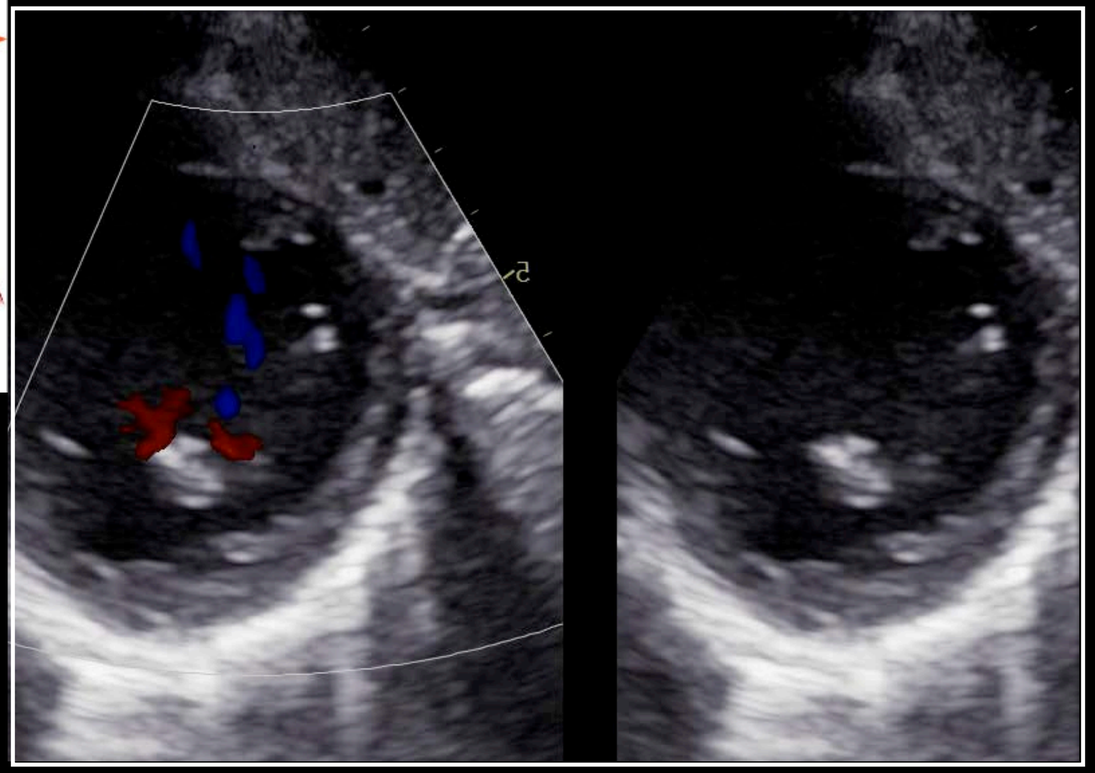






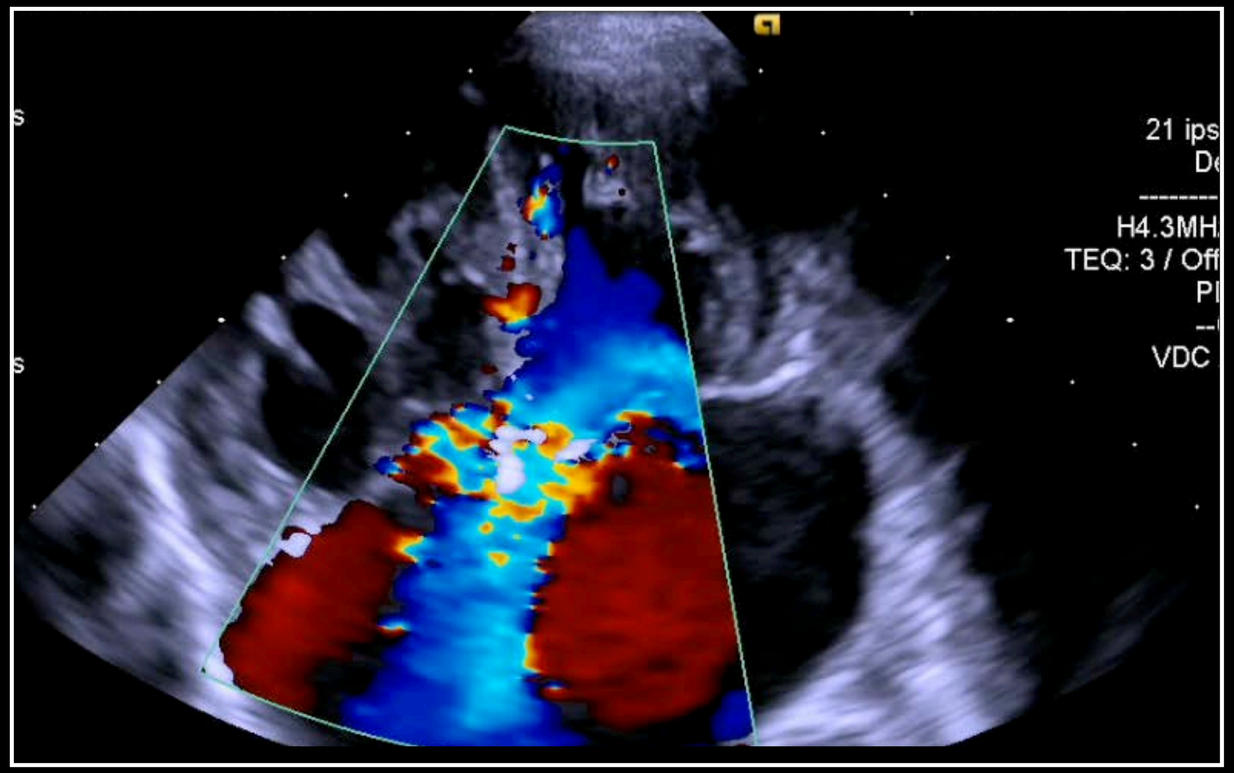
When is it difficult to dare say it is not OK ?
LAVV regurgitation





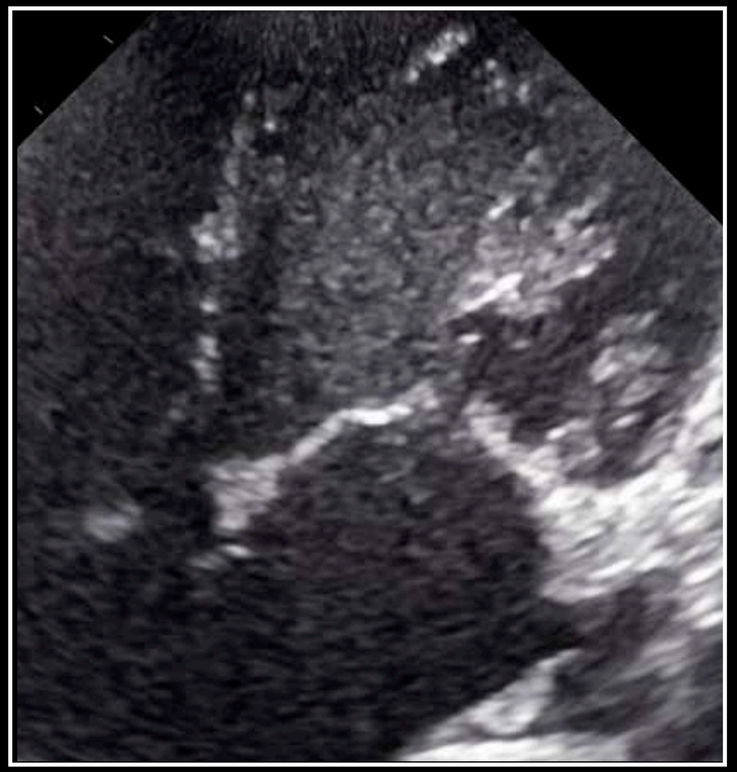
Regurgitation in the apposition zone even small - Yes

When is it difficult to dare say it is not OK ?
LAVV regurgitation



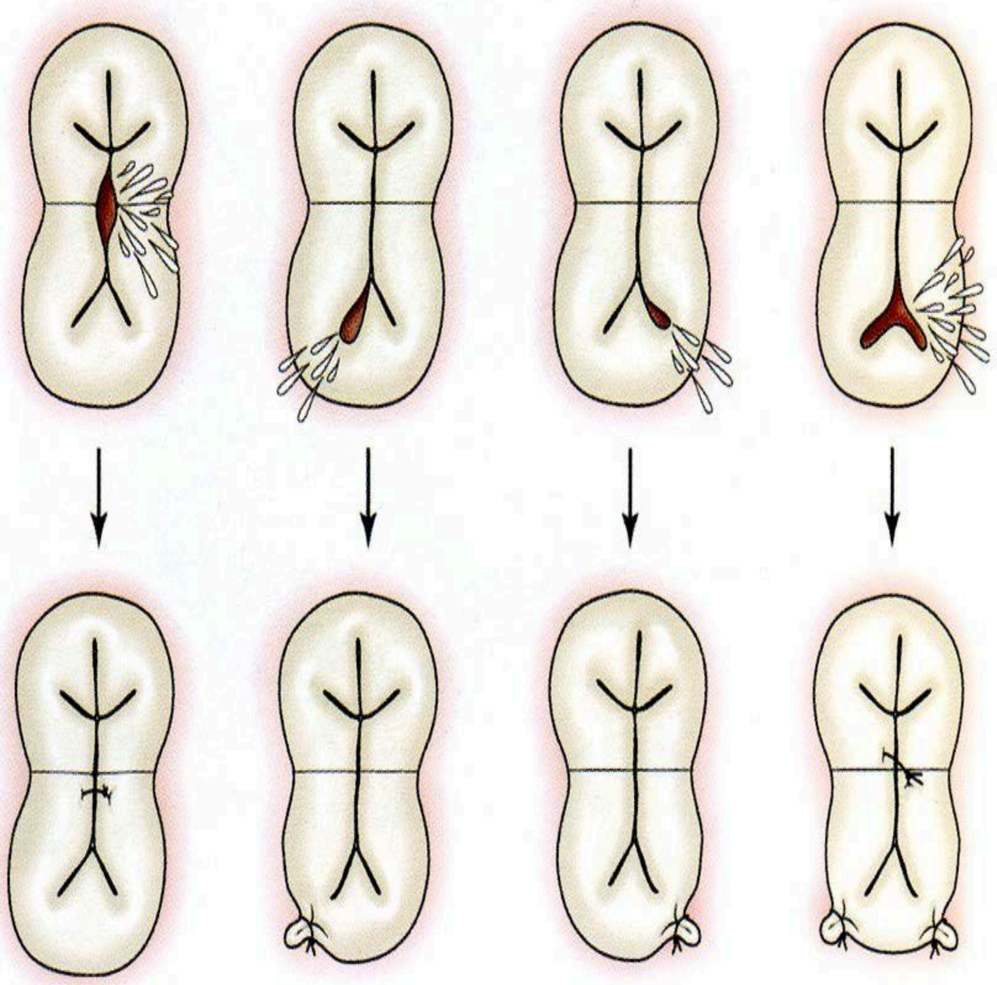
Regurgitation in the apposition zone and reopening of the cleft

When is it difficult to dare say it is not OK ?
LAVV regurgitation

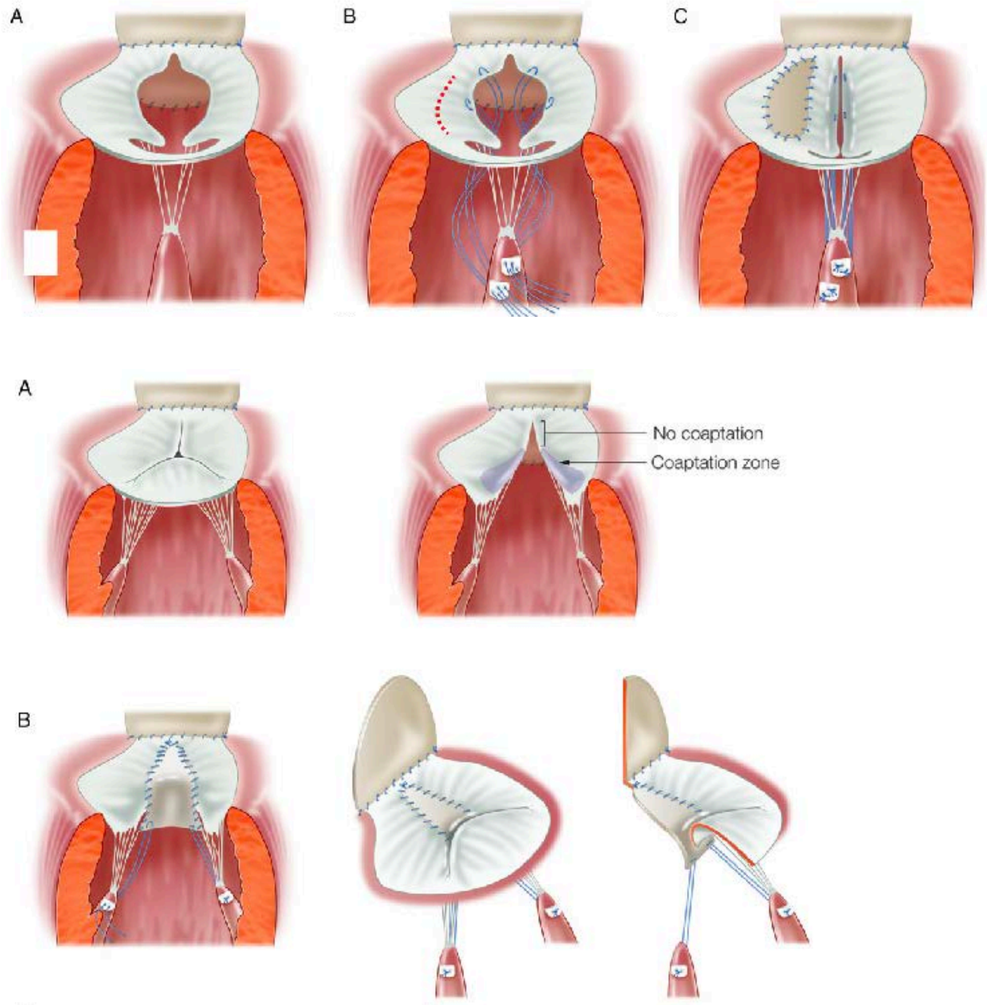


Regurgitation in the apposition zone - size of the anterior bridging leaflet - Yes

When is it difficult to dare say it is not OK ?
Previous complex repair



Annuloplasty/Commisuroplasty



Patch augmentation (cleft or leaflet)

Dare I say it is not OK ?

Yes no hesitation : when surgery has not reach the predefined goals and when diagnosis of the « not OK » problem leads to an attractive and feasible redo

Yes but : when the « not OK » problem is due to remnant anomalies (untouched/unrecognized) with hemodynamic consequences

No : when residual anomalies are related to untouched/unrcognized anomalies or to technical inadequacy without hemodynamic consequences

Procrastination when the « not OK » problem needs complex redo without good estimate of the different risks (going back on pump; success vs. late reoperation; risk of mitral valve replacement)

Collective ignorance is our motivation
Curiosity is our strength
Research is our path

Individual experience is the brake
Indifference is the weakness
Argument from authority is the threat