CHIRURGIE CARDIAQUE / CARDIAC SURGERY

CHALLENGES IN OPEN HEART SURGERY(OHS) IN AFRICA: CÔTE D'IVOIRE EXPERIENCE

Distinguished Lecture of the United States Chapter of The International Society of Surgery (ISS)delivered on Wednesday October 7 TH ,2015 during the Clinical Congress 2015 of the American College of Surgeons (ACS) in Chicago(USA)

By

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- President, African Association of Thoracic and Cardio-Vascular Surgeons
- President, Pan-African Association of Surgeons
- Immediate Past President, West African College of Surgeons

INTRODUCTION (Slide 1,2)

I would like to thank the United States Chapter of the ISS (slide 3) for inviting me at the ACS clinical congress 2015(slide 4) and give me an opportunity to speak on"Challenges in Open Heart Surgery in Africa: Cote d'Ivoire Experience"(slide 5).

I am an active member of the ISS since June 1998 (slide 6); ISS is a well-known society of surgeons chaired by prestigious surgeons such as the Swiss Theodor Kocher (1840-1917) who was the first surgeon to receive the Nobel Prize in 1909 (slide 7).

Cote d'Ivoire is located in Western Africa (slides 8-9); its physical features are shown on slide 10. His Excellency Late Dr Felix Houphouet-Boigny, former President of Cote d'Ivoire(1960-1993) (slide 11) facilitated the creation of the first "Heart Institute of Cardiology" (slide 12) where the fisrt open heart surgery in Côte d'Ivoire was performed on March 16th,1978 in Abidjan (slide 13) by 3 surgeons: Pr D. Metras,Pr A.Ouezzin-Coulibaly and Late Dr K.Ouattara (slide 14).

CARDIAC LESIONS AND SURGERY

Acquired valvular Heart Diseases and Congenital Heart Diseases were the two main categories described in our experience (slides 15).

Regarding Acquired valvular diseases three etiologies were concerned:Rheumatic Fever,the most frequent; Native Valve Endocarditis and Endomyocardial Fibrosis (slide 16-17)

Most often, rheumatic fever attacked the Mitral valve with massive destruction (slides 18,19,20,21,22) ; usually, the severity of rheumatic valve lesions made surgical repair uneasy and replacement by bioprosthesis or mechanical devices more adequate to perform (slides 23,24,25,26). Bioprosthesis degeneration as main complication or disadvantage of biological prosthesis, occurred between 4.24 and 6.5 years post-operative follow-up (slides 27,28)

A tropical valvular heart disease called"Endomyocardial Fibrosis (EMF)" (slide 29) has also been diagnosed (slides 30,31);its clinical, imaging features ;surgical procedures and results are shown on slides (32,33,34,35,36). Different types of Congenital Heart Diseases(CHD) were noted with an overall surgical hospital mortoality at 10% (slides 37-45)

CHALLENGES (slide 46)

-Rheumatic Heart Disease (RHD) is the most common form of Cardio-vascular diseases in the developing world and it will remain as it is for the next 20-40 years to come in sub-saharan Africa (slides 47,48,49) where exists the highest prevalence of RHD worldwide

-RHD is the leading cause of death during the first 5 decades of life with a mortality of 20% at 6 years follow-up in Nigeria (slide 50)

-RHD causes extensive and severe heart valve lesions (slide 51) making quasi-impossible valve repair in our context;such situation should be avoided by earlier diagnosis and surgical treatment for it has been demonstrated best long term results after conservative surgical procedure rather than valve replacement (slides 52,53).

-EMF is a mysterious pathology with a remaining unknown etiology (slide 54); we have one of the most largest clinical and surgical experience in the world.

-Lack of detecting CHD in Cote d'Ivoire as in sub-saharan Africa (slides 55,56); of cardiac centres (slides 57,58,59); of specialized personnel in Cardiology and Cardiac Surgery including cardiac surgeons (slides 60,61,62,63). Therefore ,we need more structured training programmes for cardiologists and cardiac surgeons in our developing countries (slides 64, 65,66,67)

-Sustainability of training programme, of cardiac centres and Cost constraints for cardiac surgery are crucial (slides 68,69,70); patients have no enough financial ressources to afford cardiac surgery (slides 71,73) and there is no health insurance scheme (slide 72)

-Insufficient number of OHS done, less than 400 operations per million of population per year (slides 73,74) because of lack of funding (slide 74) or other difficulty as limited laboratory support in some countries like Nigeria (slide 75)

RECOMMANDATIONS (slide 76)

Recommandations are as follows:

-Public Health insurance to be planned (slide 77)

-More Centres for Cardiac surgery to be effective(slide 78) for training and health care;a new cardiac centre in construction is going to commence activities soon (slides 79,80,81) in Côte d'Ivoire

-Global expansion of OHS (slides 82-83)should include : Government, international and regional cooperation,non governmental organizations,fondations,donors,industries;and should also include scientific exchanges at local,regional and international levels (slides 84-93); and promotion of clinical research (slide 94)

CONCLUSION

Before ending my lecture,may I give a tribute to all my predecessors since the beginning in 1992 of this distinguished lecture (slides 95-98); to the USA Chapter of the ISS;to two American College of Surgeons past –presidens I met some years ago for the first time in Washington DC (USA) (slide 99); Prof Patricia Numman was one of them. I share with Prof Patricia Numman a same idea: Bringing more African women to Surgery. We all know:Women are the cornerstones of our families in Africa;educating women means more than anywhere else,educating a Nation;moreless,empowering Women in Africa can be one of the solutions to end poverty in Africa (slide 100)

Ladies and Gentlemen,We should all remember the 5 phases of life:VITA (Life), LABOR (Work), STUDIUM (Study), CHARITAS (Charity), MORS(Death) mentioned by Gregorio Calvi di Bergolo (1904-1994) (slides 101,102); Indeed,we shall all die one day, whatever we are. Lifetime

is very short and we don't have to wait too long for actions. Actions are your passion; actions are my passion; you and I can change the world with Joy, Enthousiasm, Optimism (slide 103); you and I can transform dream into reality (slide 104); we can make it happen (slide 105).

Dear Colleagues,

your humble servant, your Guest has spoken (slide 106)

God bless America,
God bless Africa,
God bless the World
Thank you for your attention

APPENDIX : SLIDES

THE DISTINGUISHED LECTURE OF THE INTERNATIONAL SOCIETY OF SURGERY

was established by the Board of Regents of the American College of Surgeons in June 1990, and the first lecture was delivered at the 1992 Clinical Congress in New Orleans, Louisiana. This Lecture was proposed and endowed by the U. S. Chapter of the International Society of Surgery to recognize the Society's worthwhile activities by honoring distinguished international surgeons at the annual Clinical Congress of the American College of Surgeons. The next Distinguished Lecture of the International Society of Surgery at the Clinical Congress of American College of Surgeons will be:

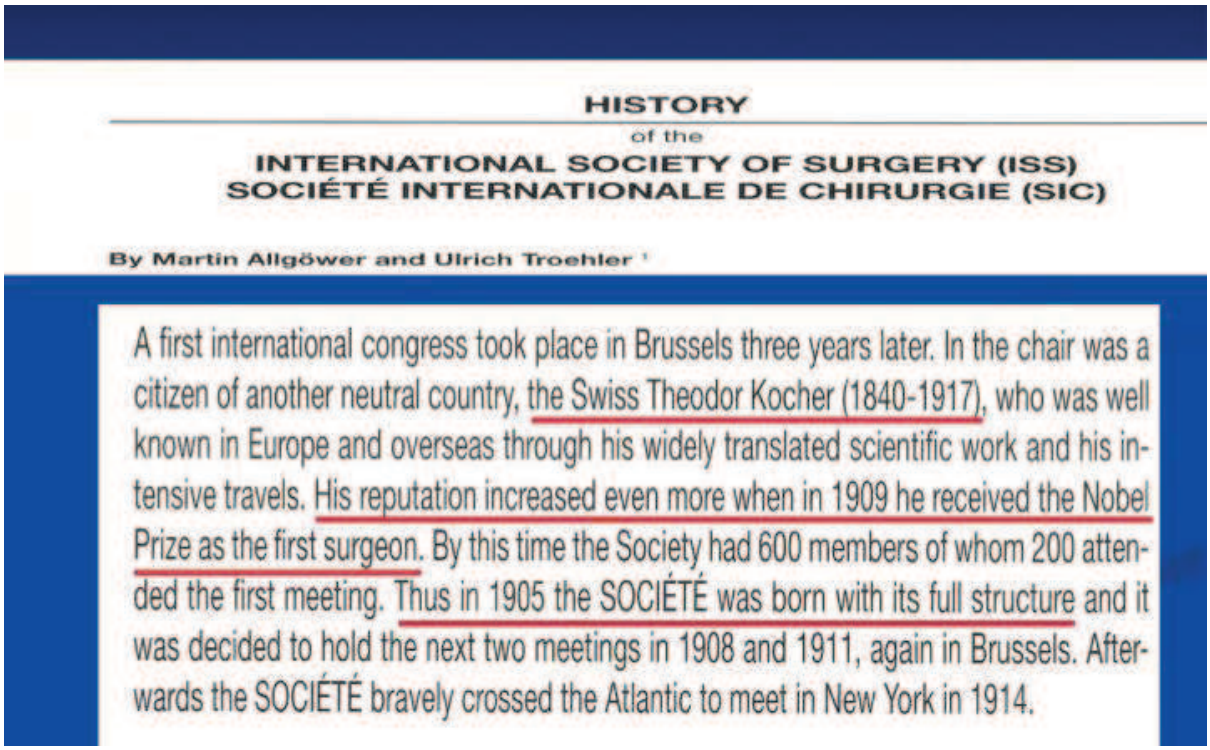
Lecturer: Koffi Herve Yangni-Angate
Title: Challenges in Open Heart Surgery in Africa: Côte – d'Ivoire Experience
Location: McCormick Place Convention Center – Room: W-179
Date: Wednesday, October 7, 2015
Time: 8:00 am – 9:00 am

Slide 2

Slide 3

Slide 4

Slide 5



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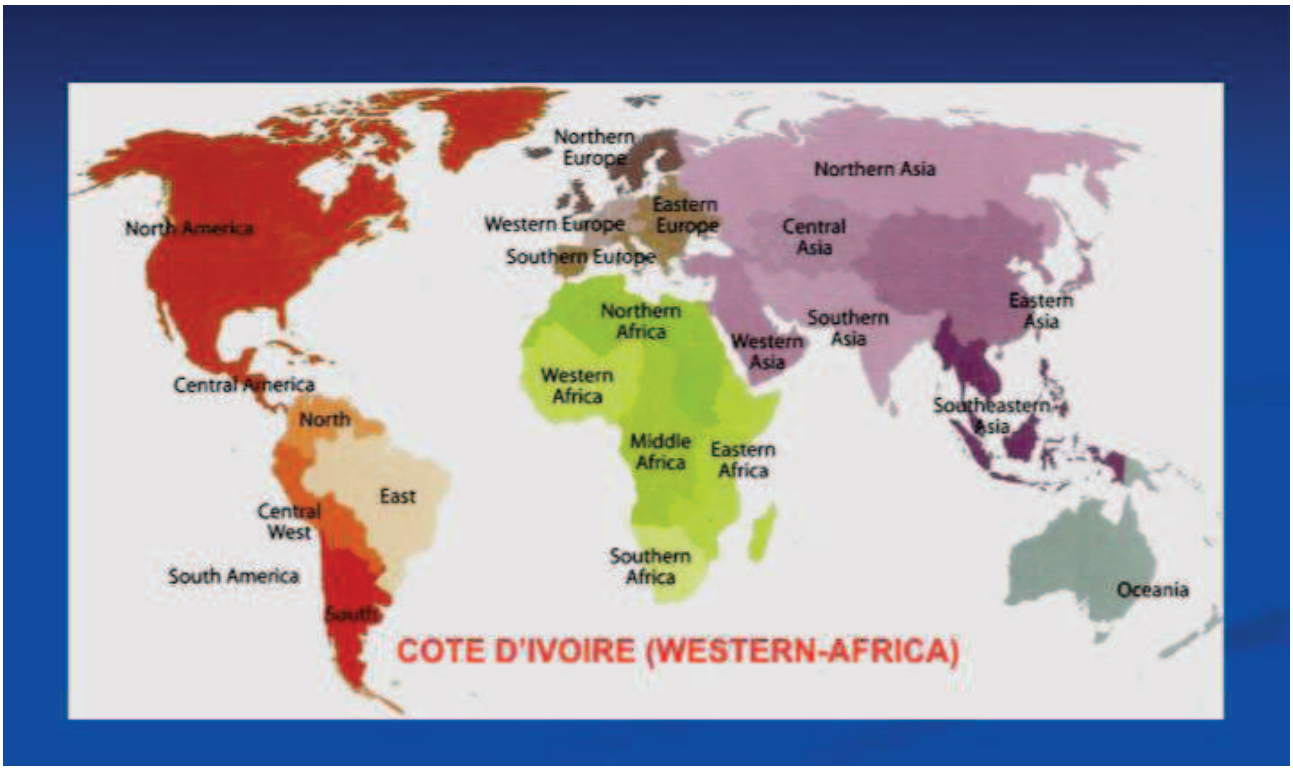

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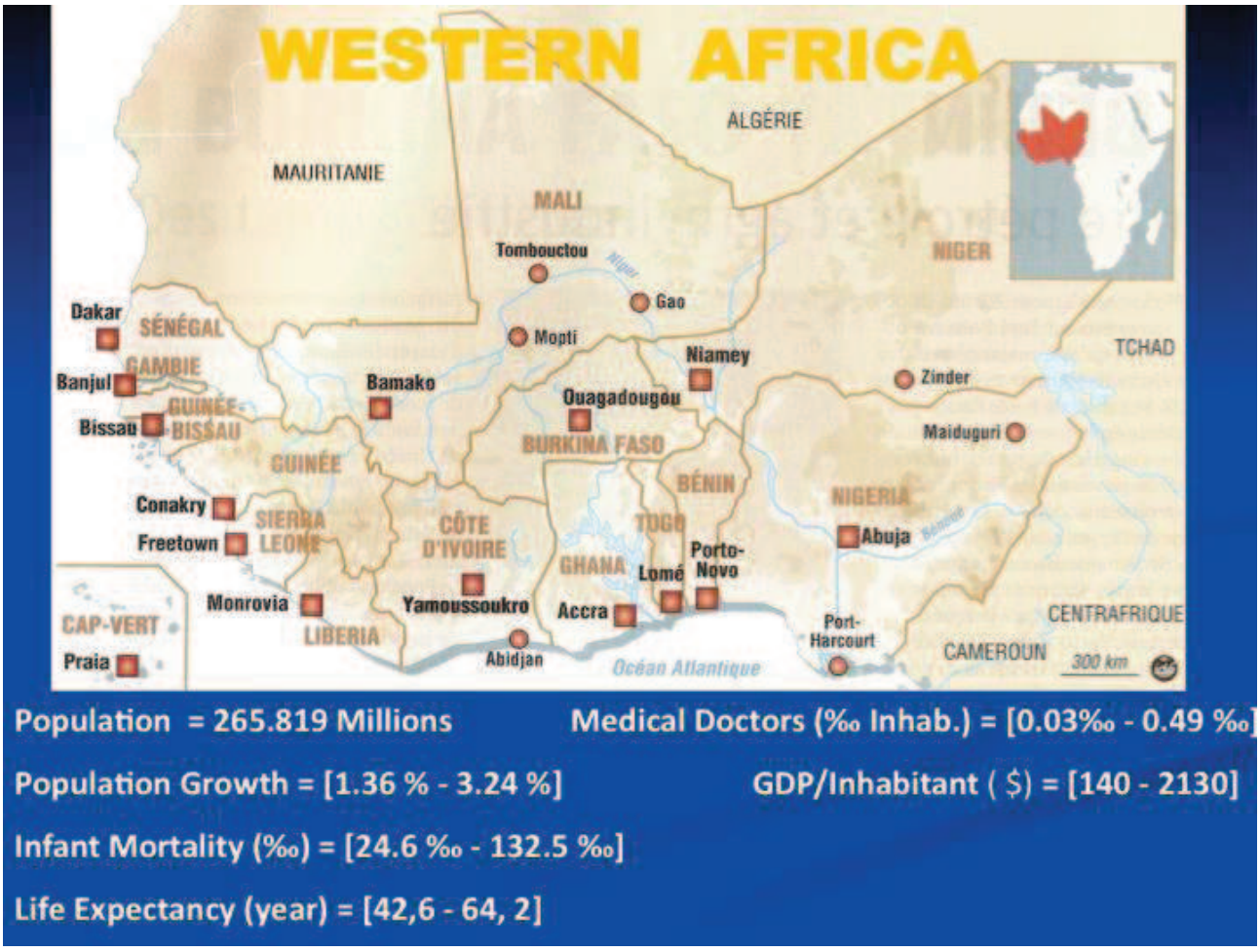

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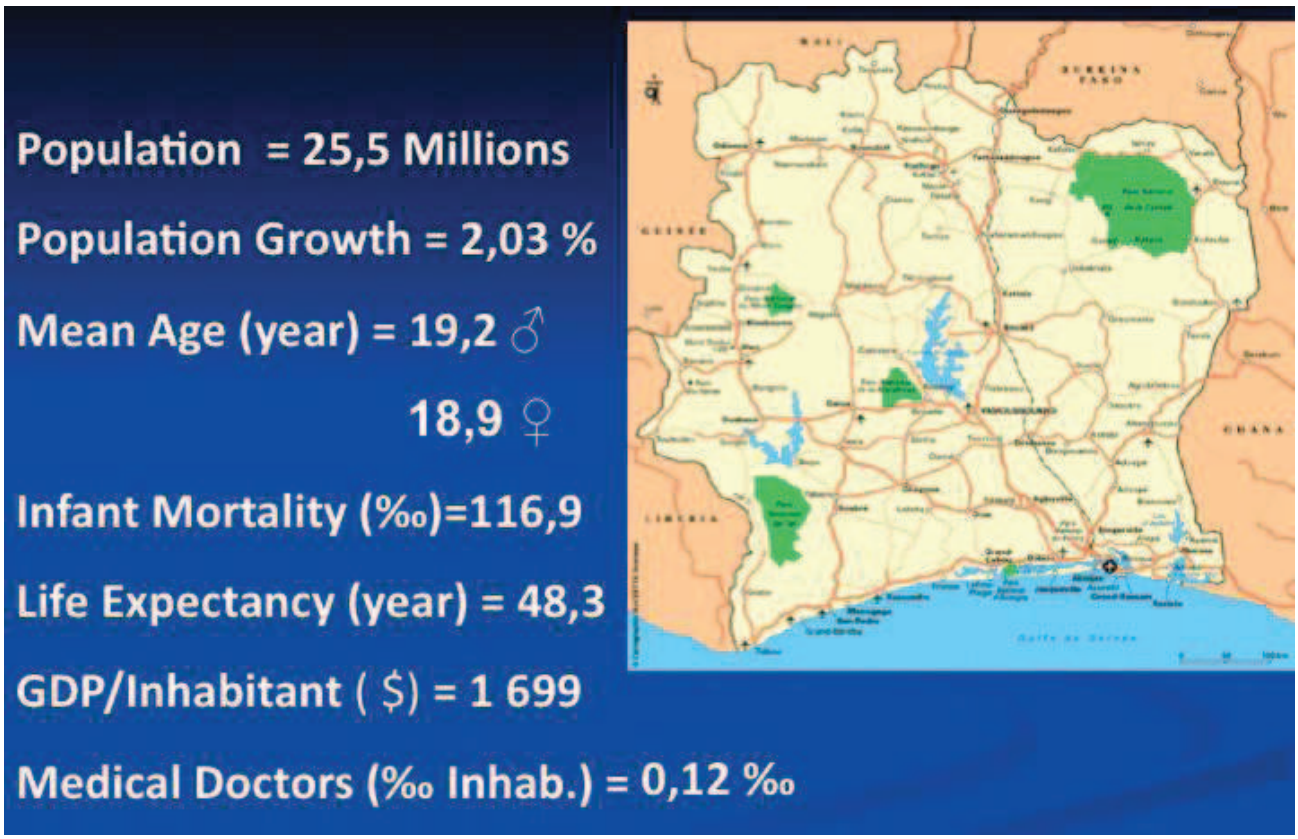

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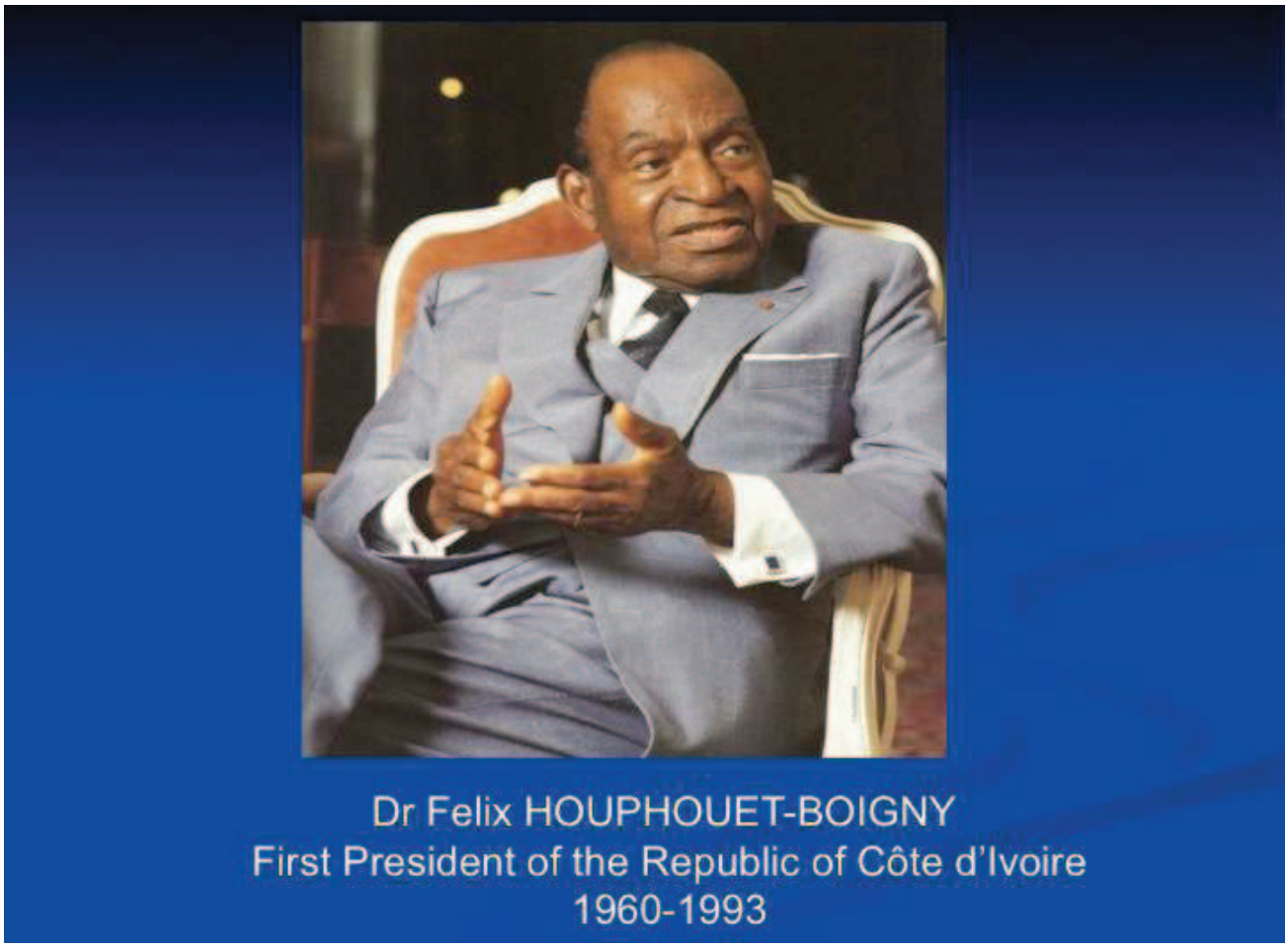

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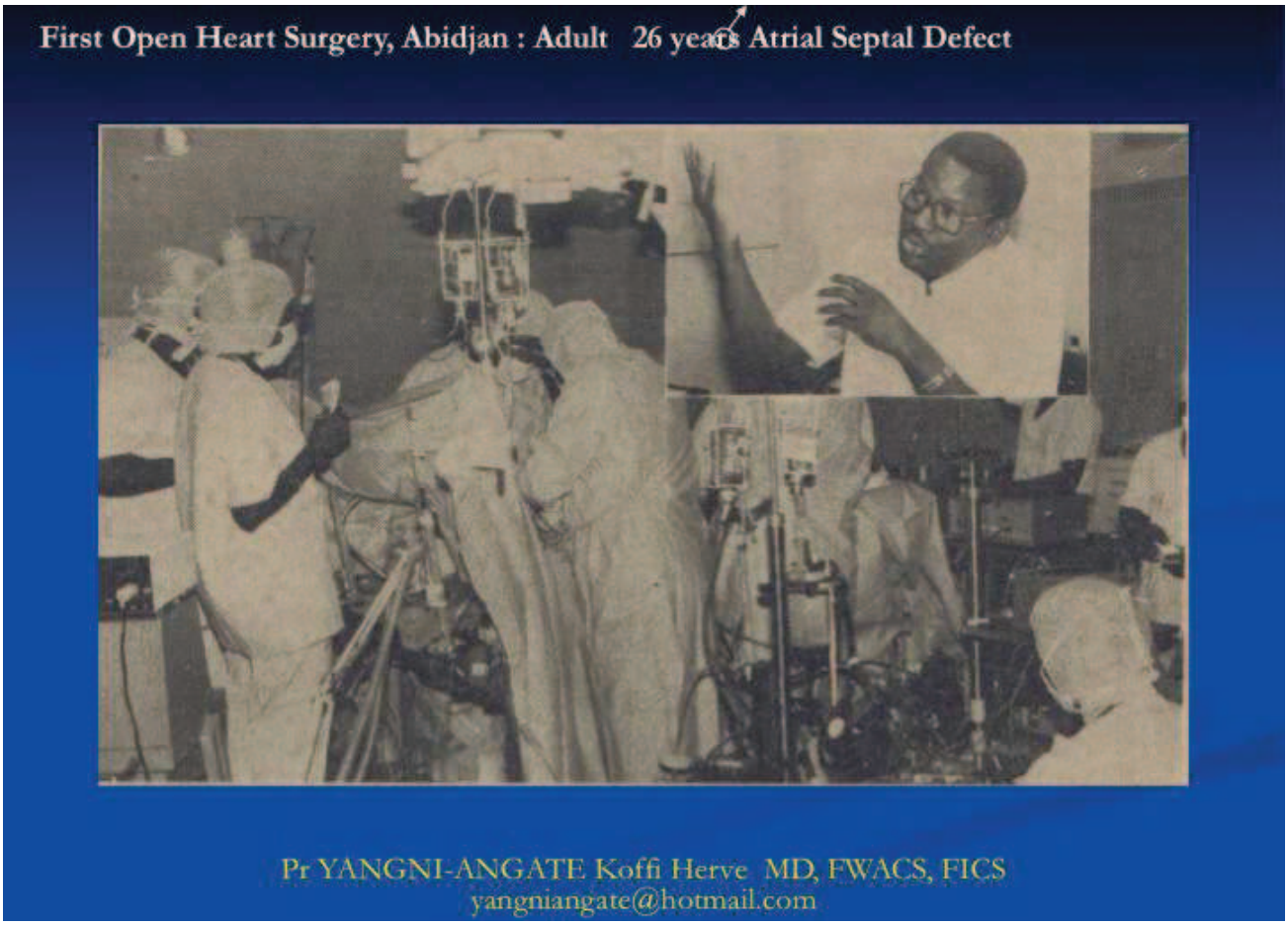

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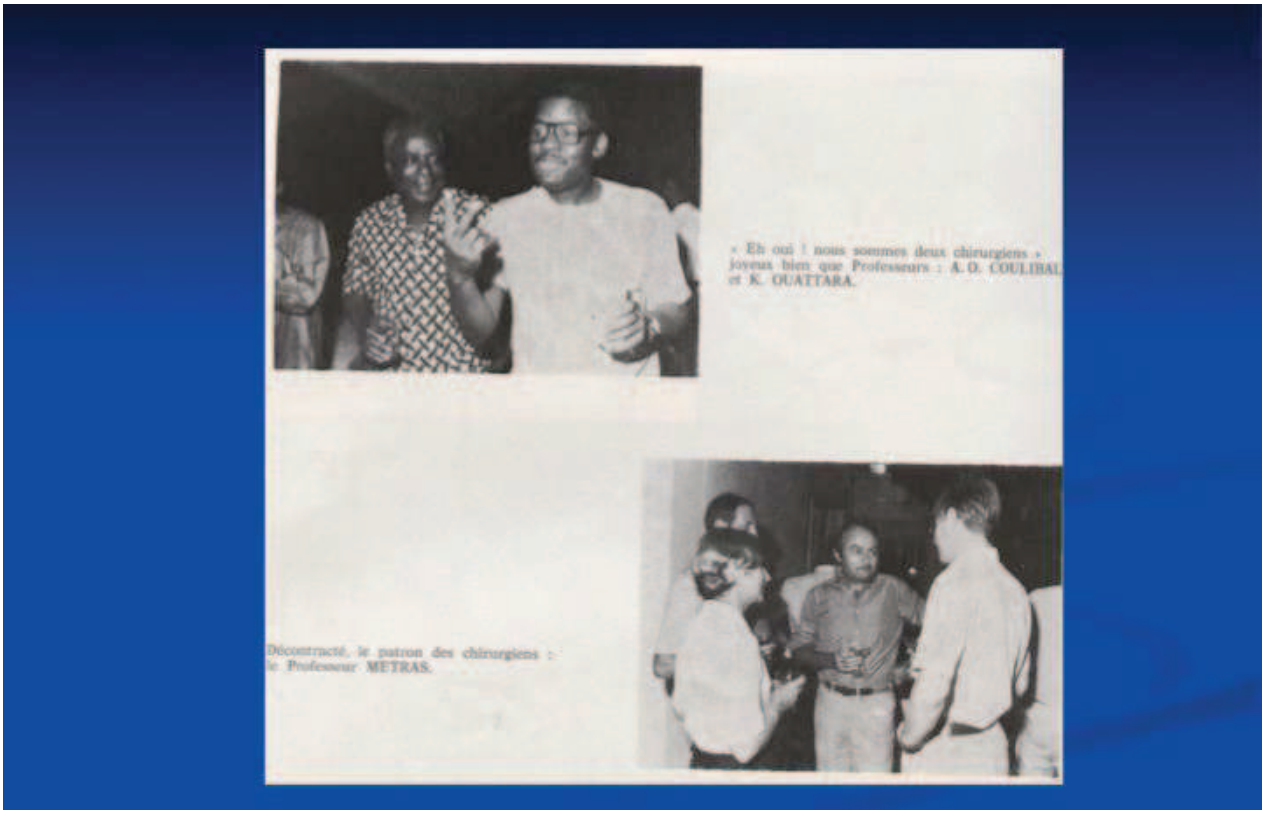

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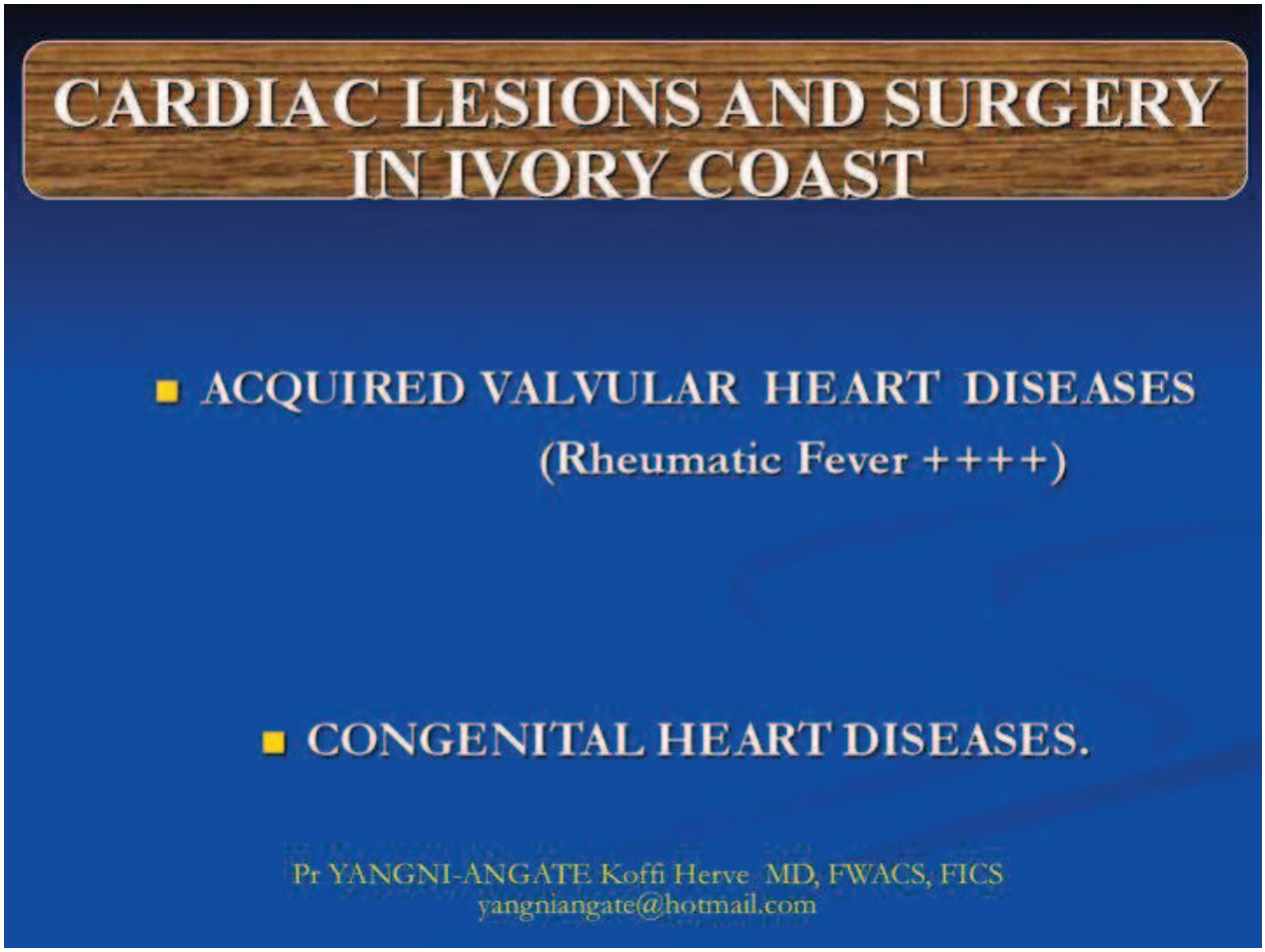

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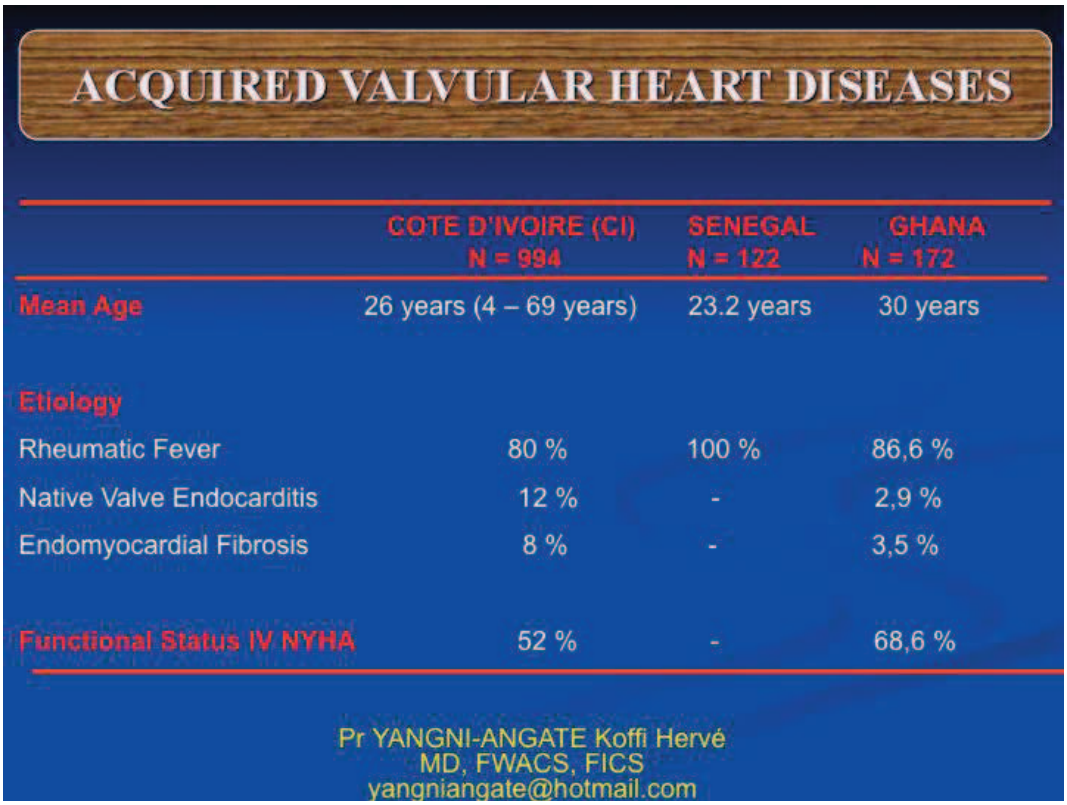

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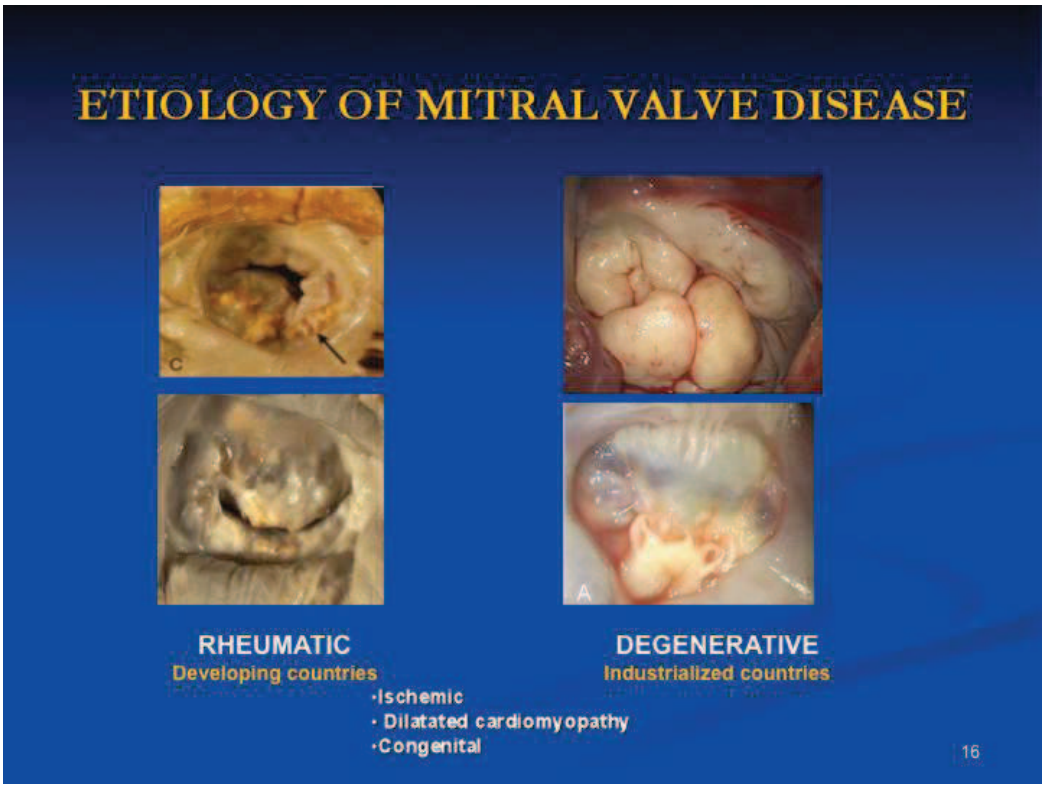

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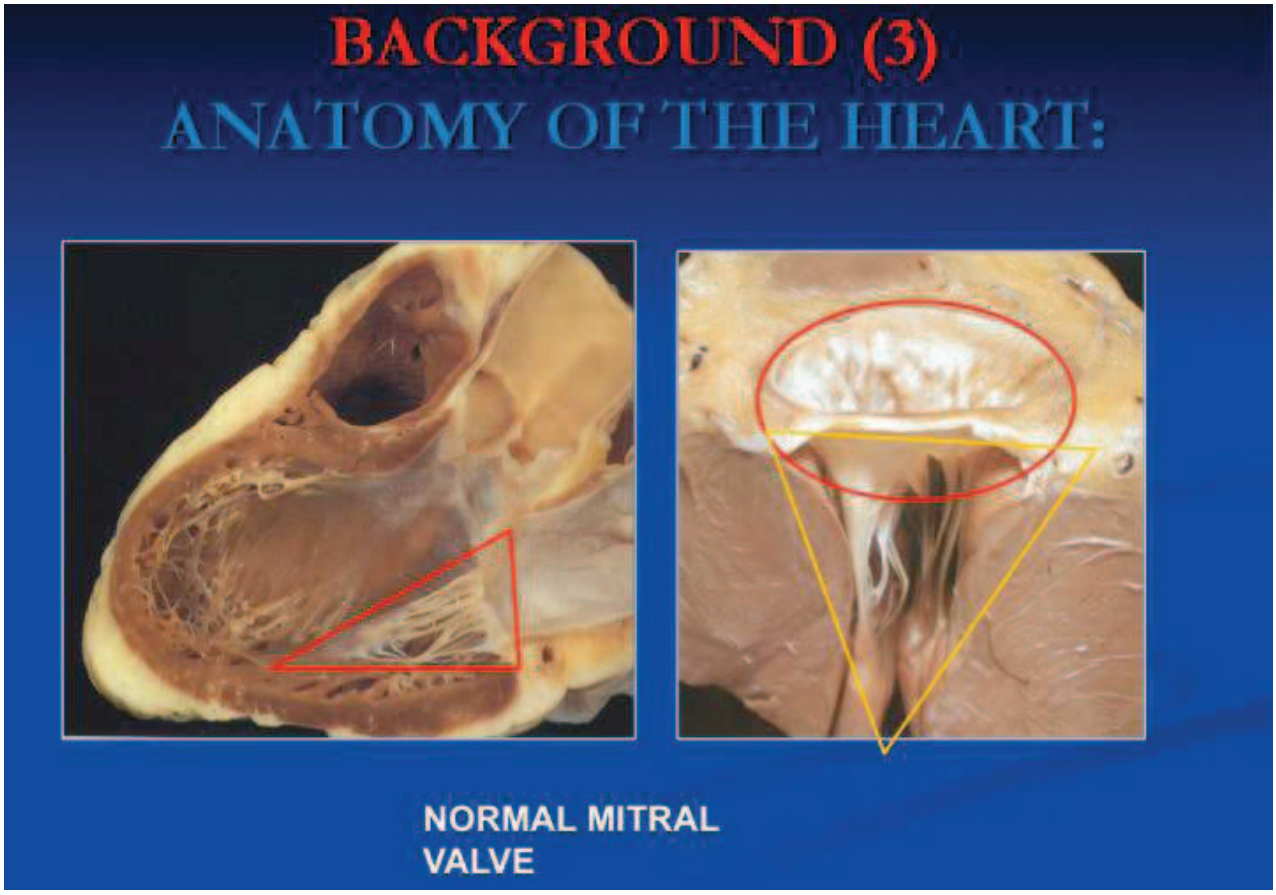

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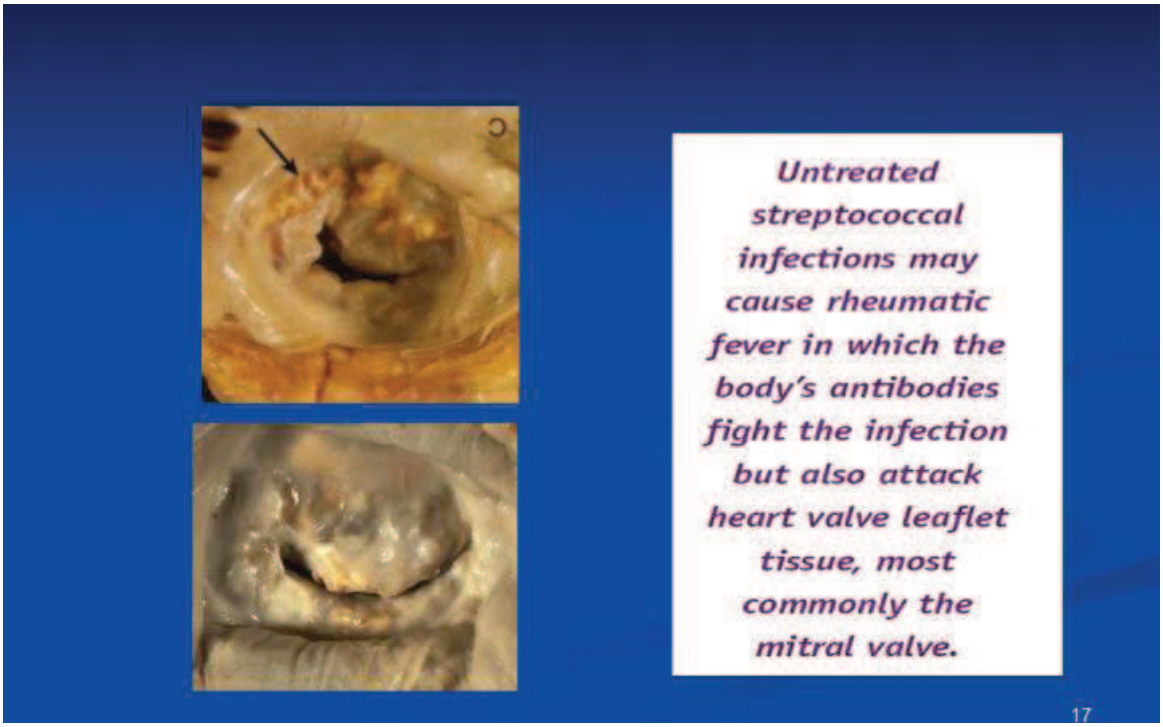

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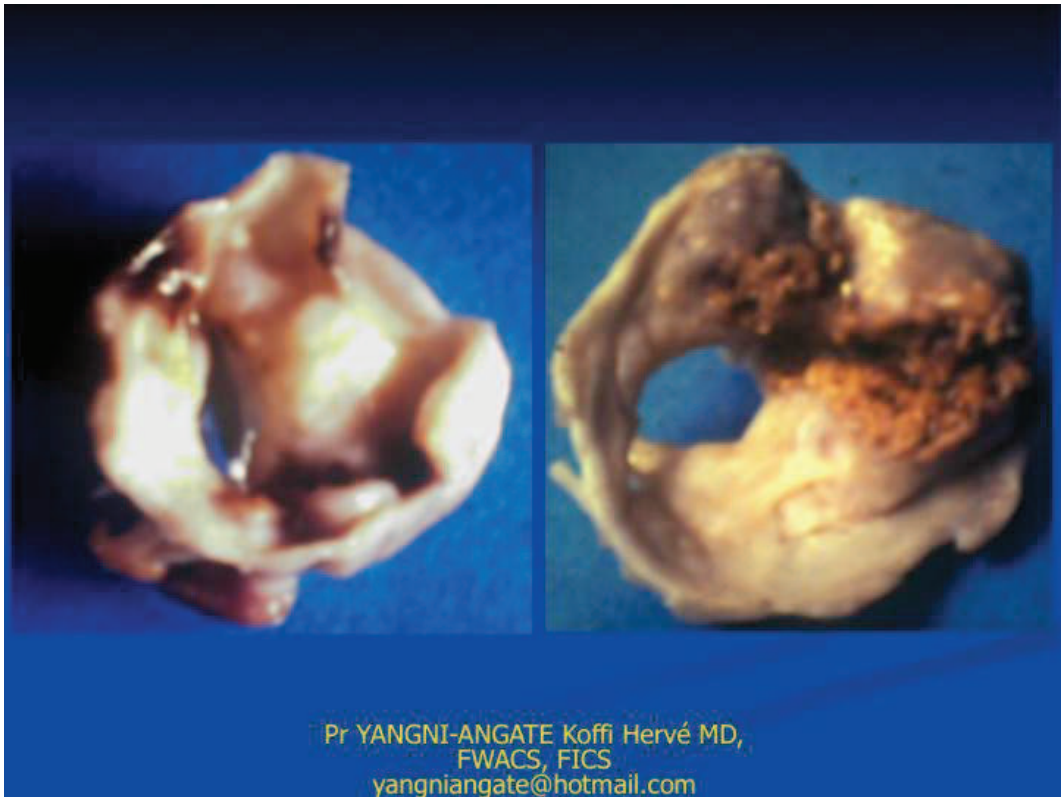

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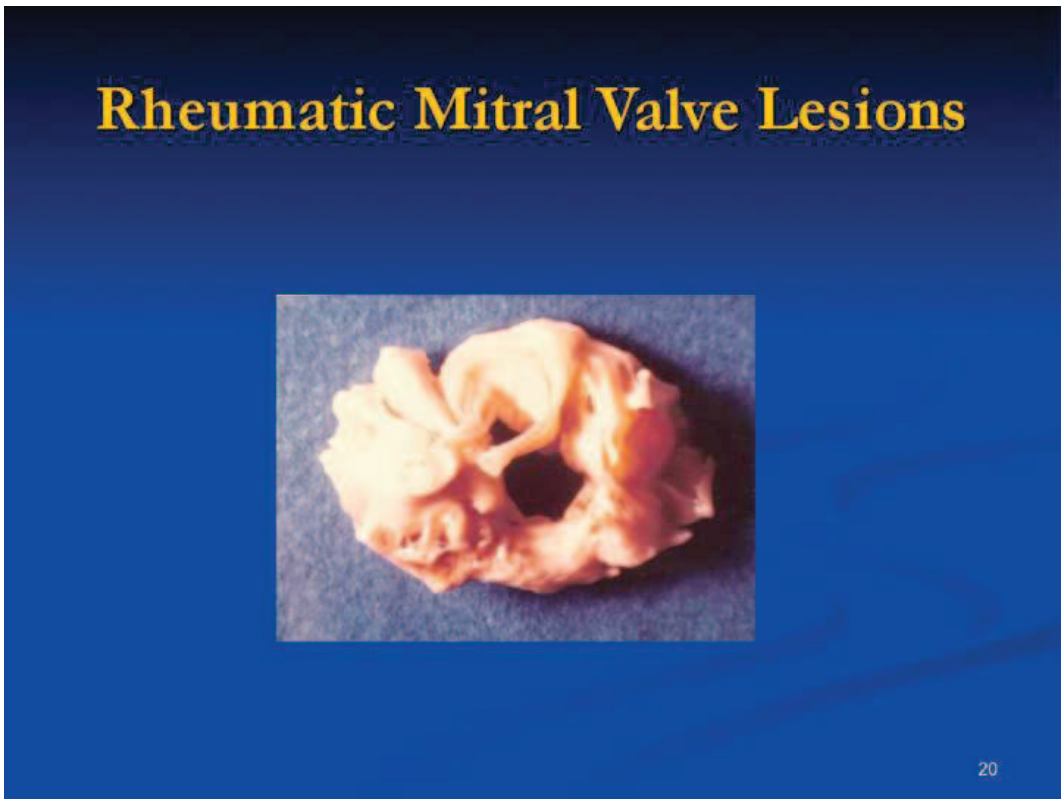

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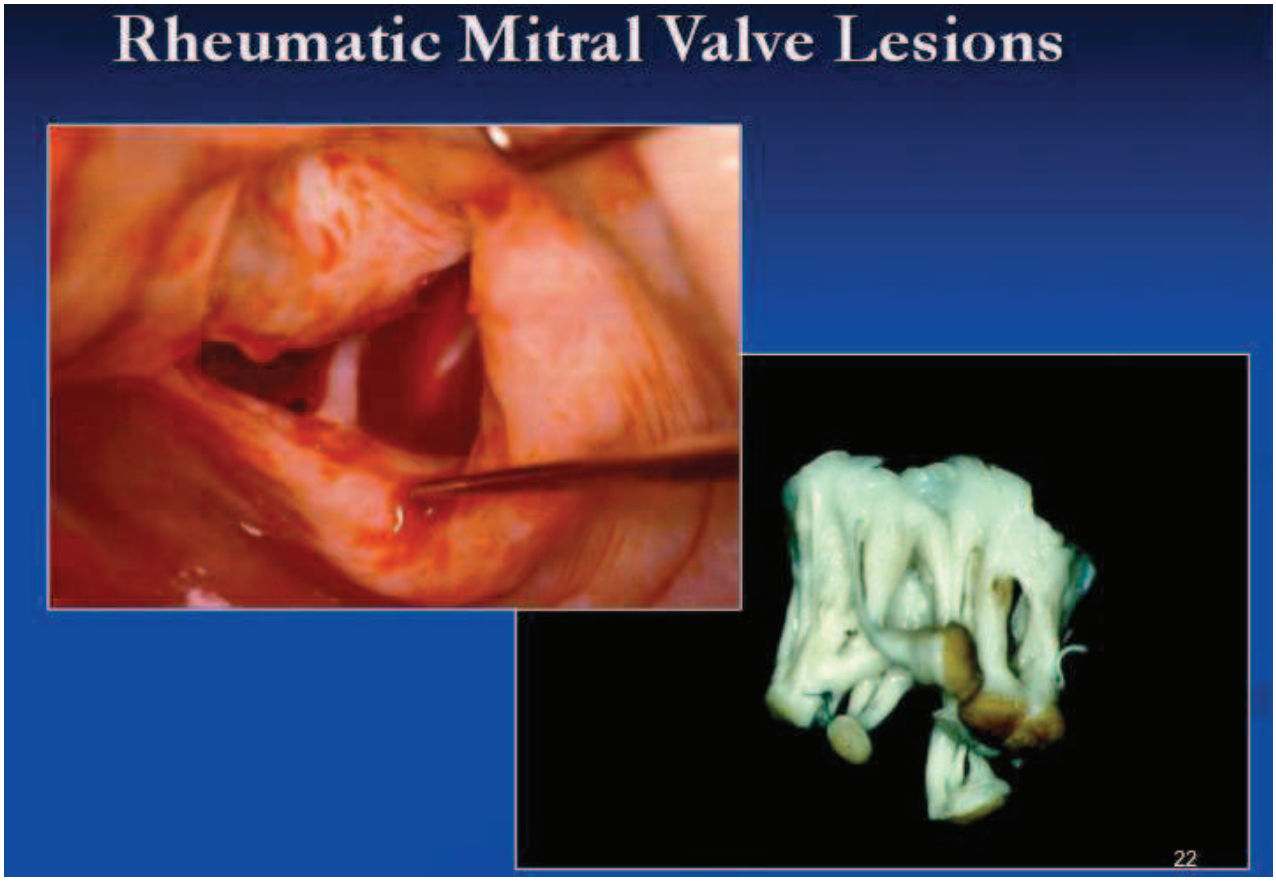

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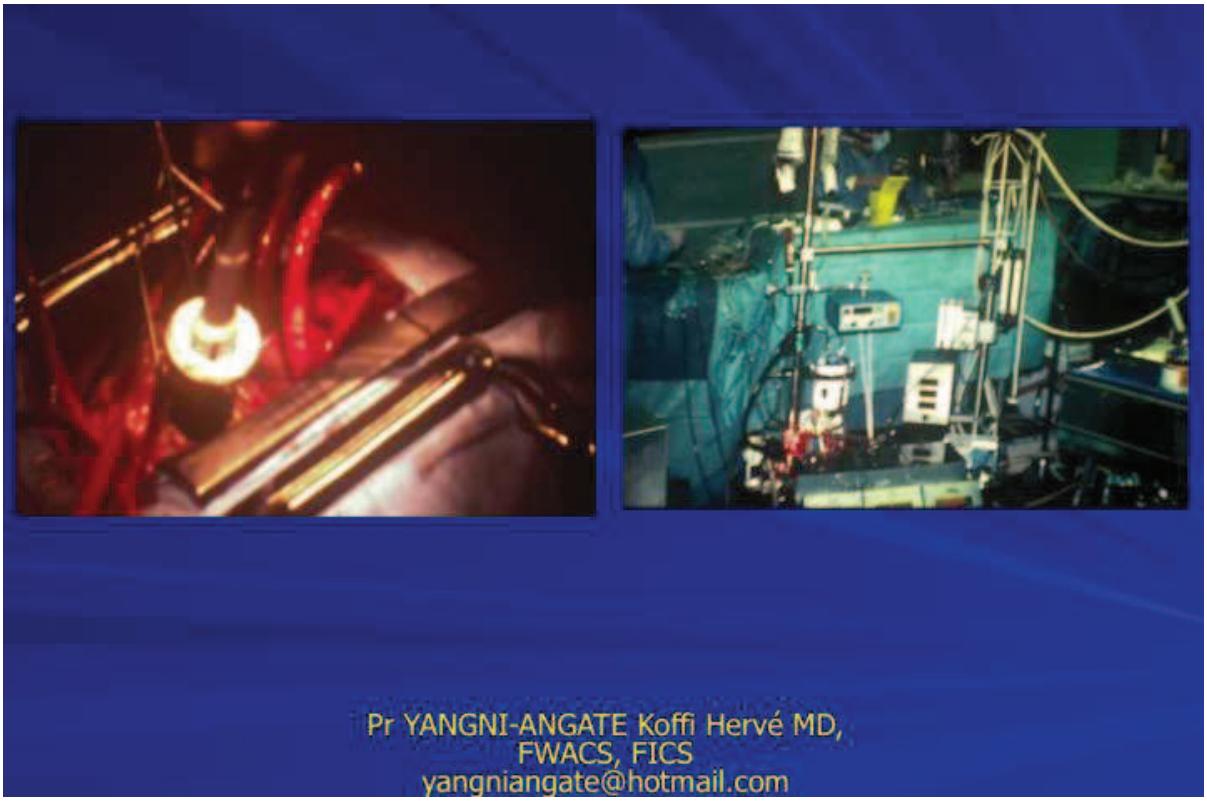

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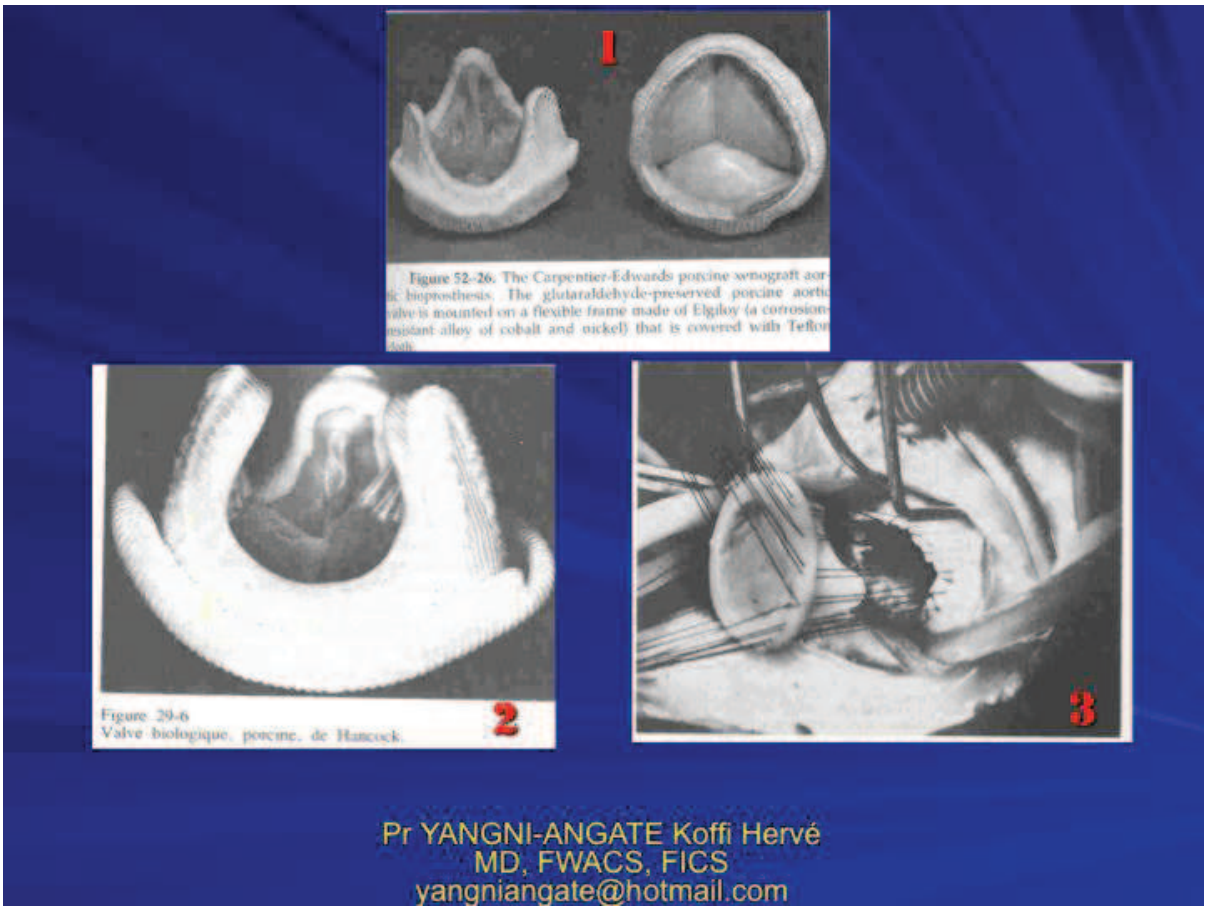

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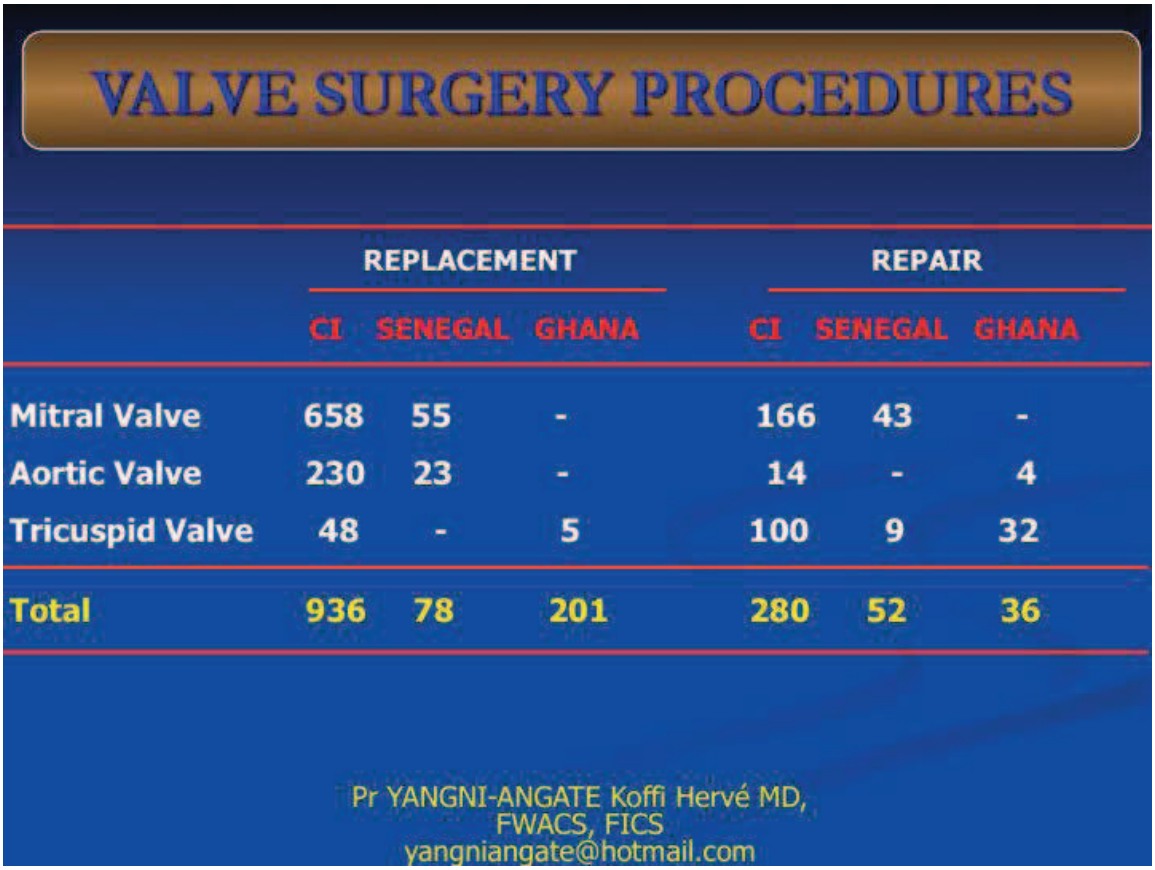

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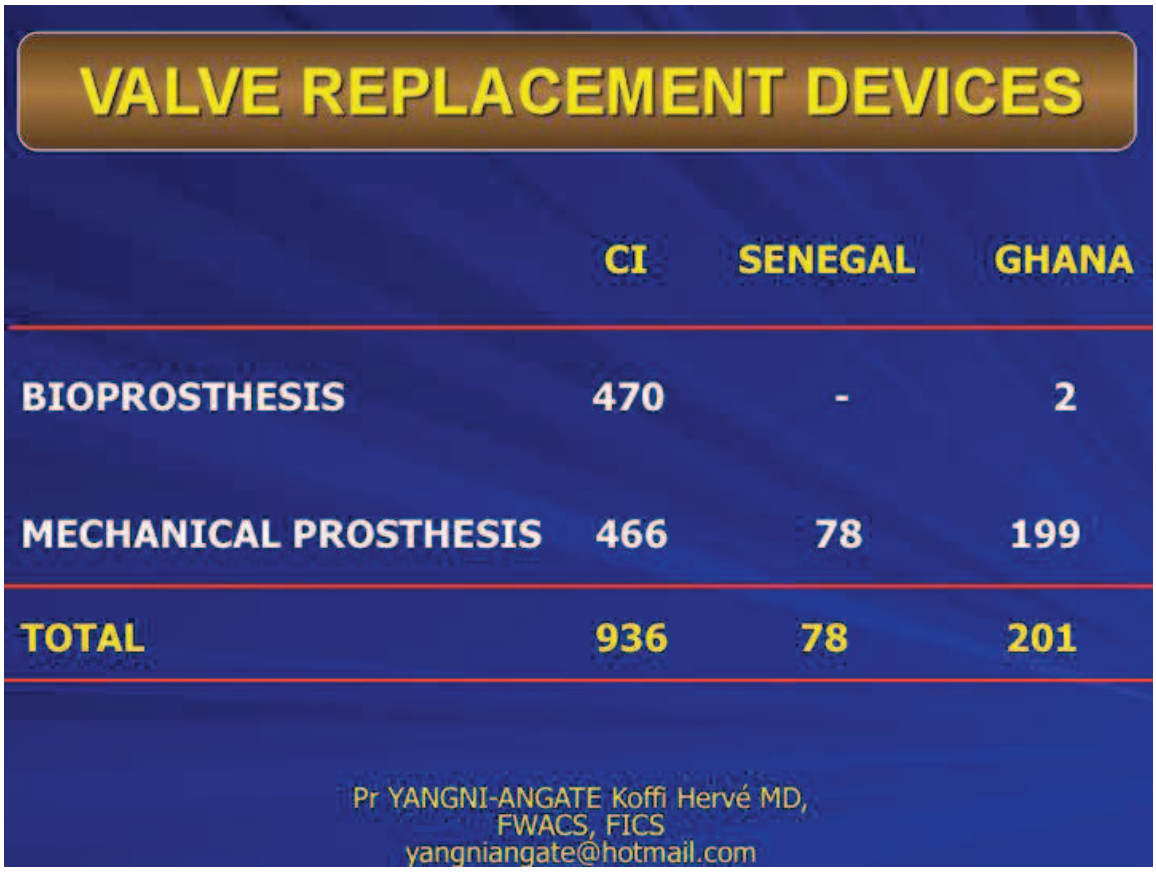

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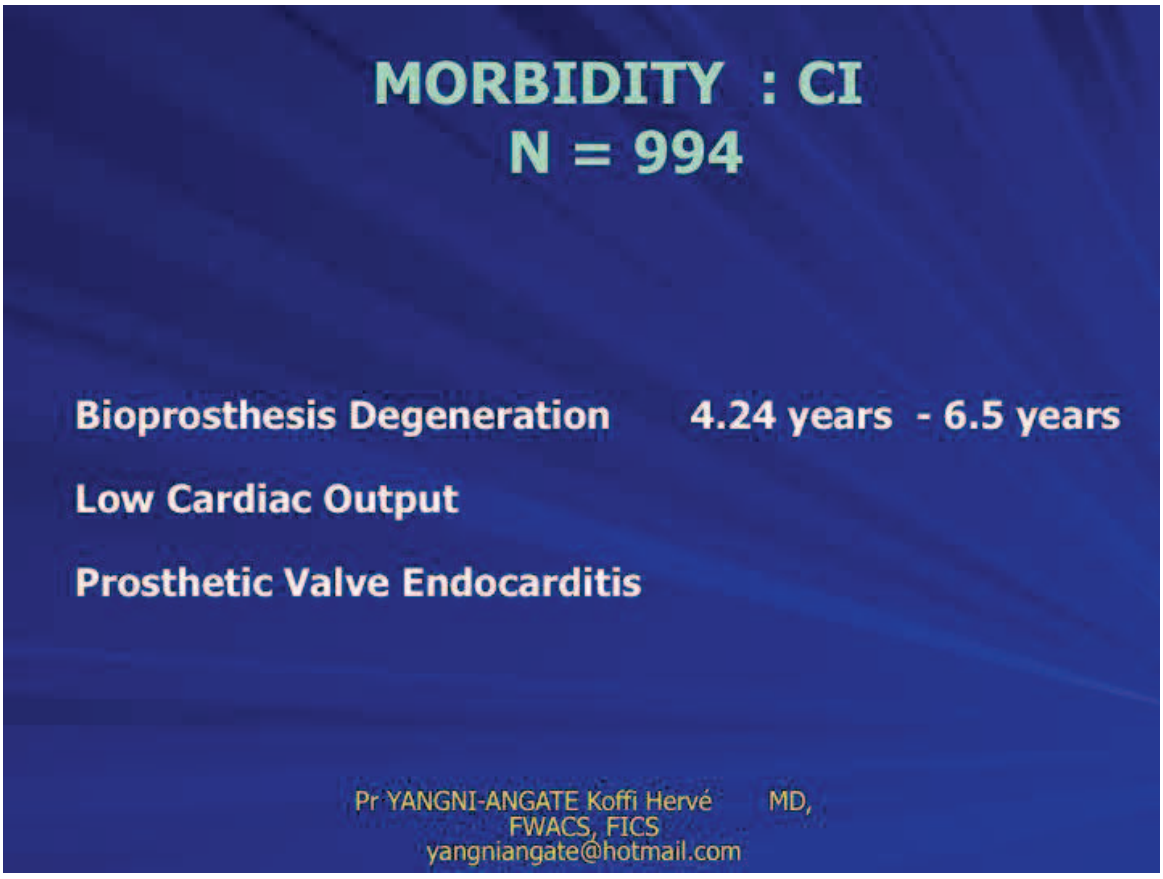

Slide 27

Slide 28

ACQUIRED VALVULAR HEART DISEASES

	COTE D'IVOIRE (CI) N = 994	SENEGAL N = 122	GHANA N = 172
Mean Age	26 years (4 – 69 years)	23.2 years	30 years
Etiology			
Rheumatic Fever	80 %	100 %	86,6 %
Native Valve Endocarditis	12 %	-	2,9 %
Endomyocardial Fibrosis	8 %	-	3,5 %
Functional Status IV NYHA	52 %	-	68,6 %

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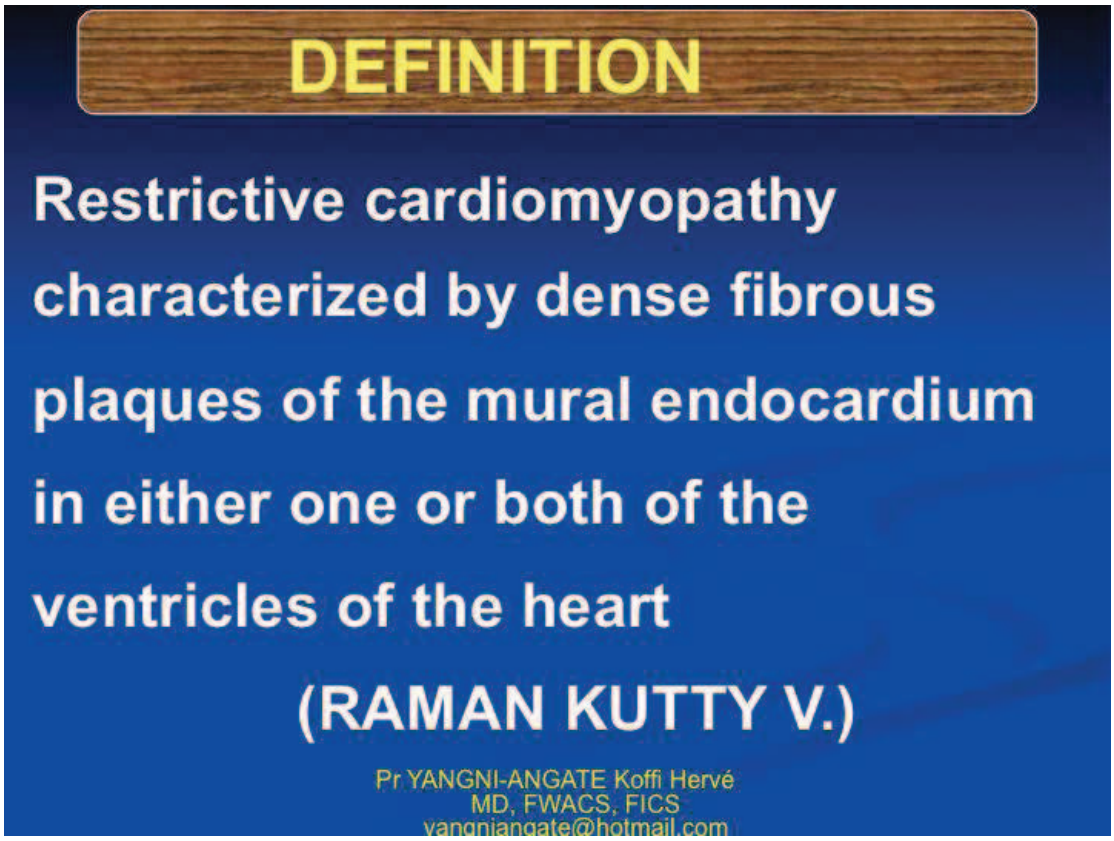

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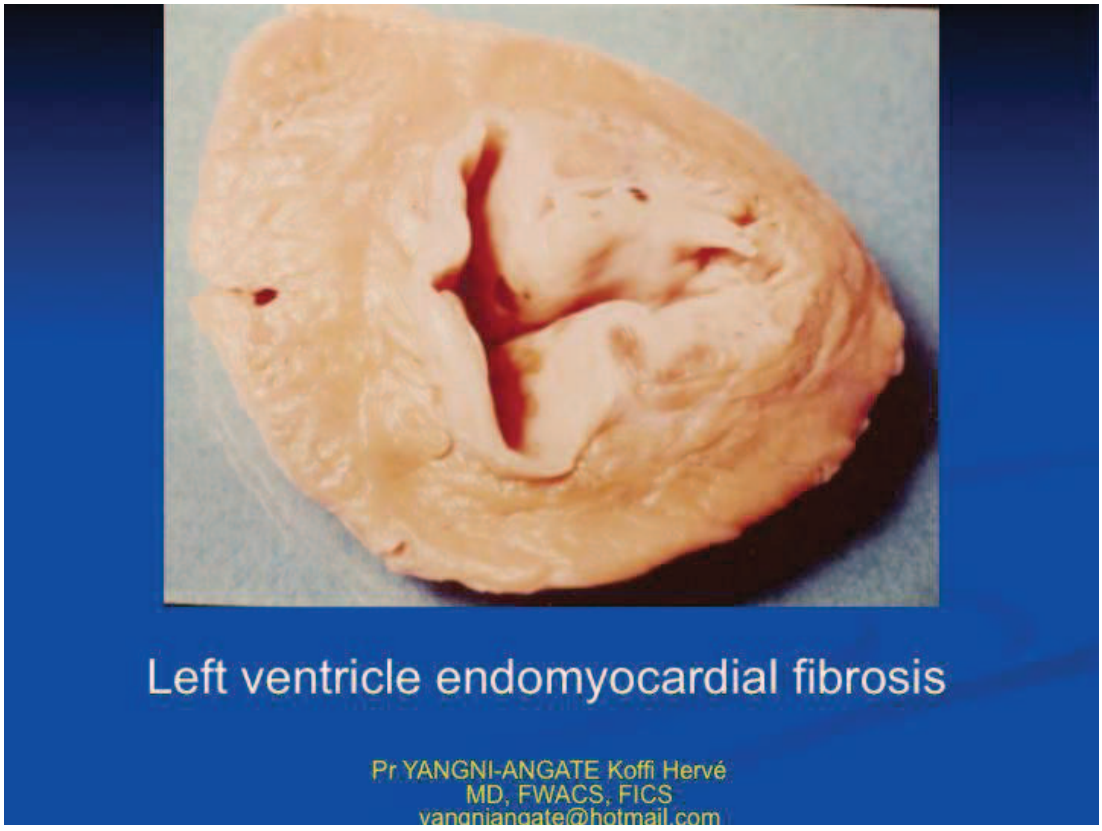

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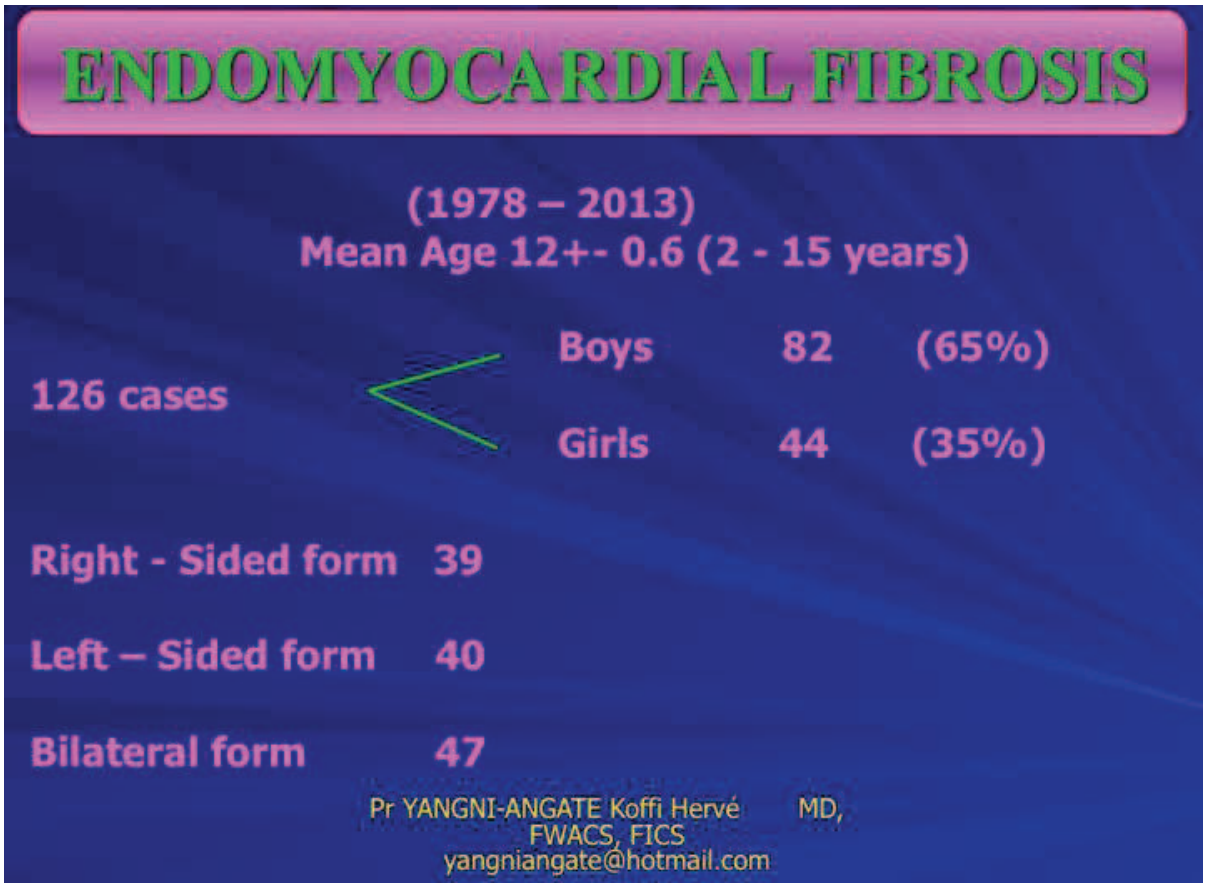

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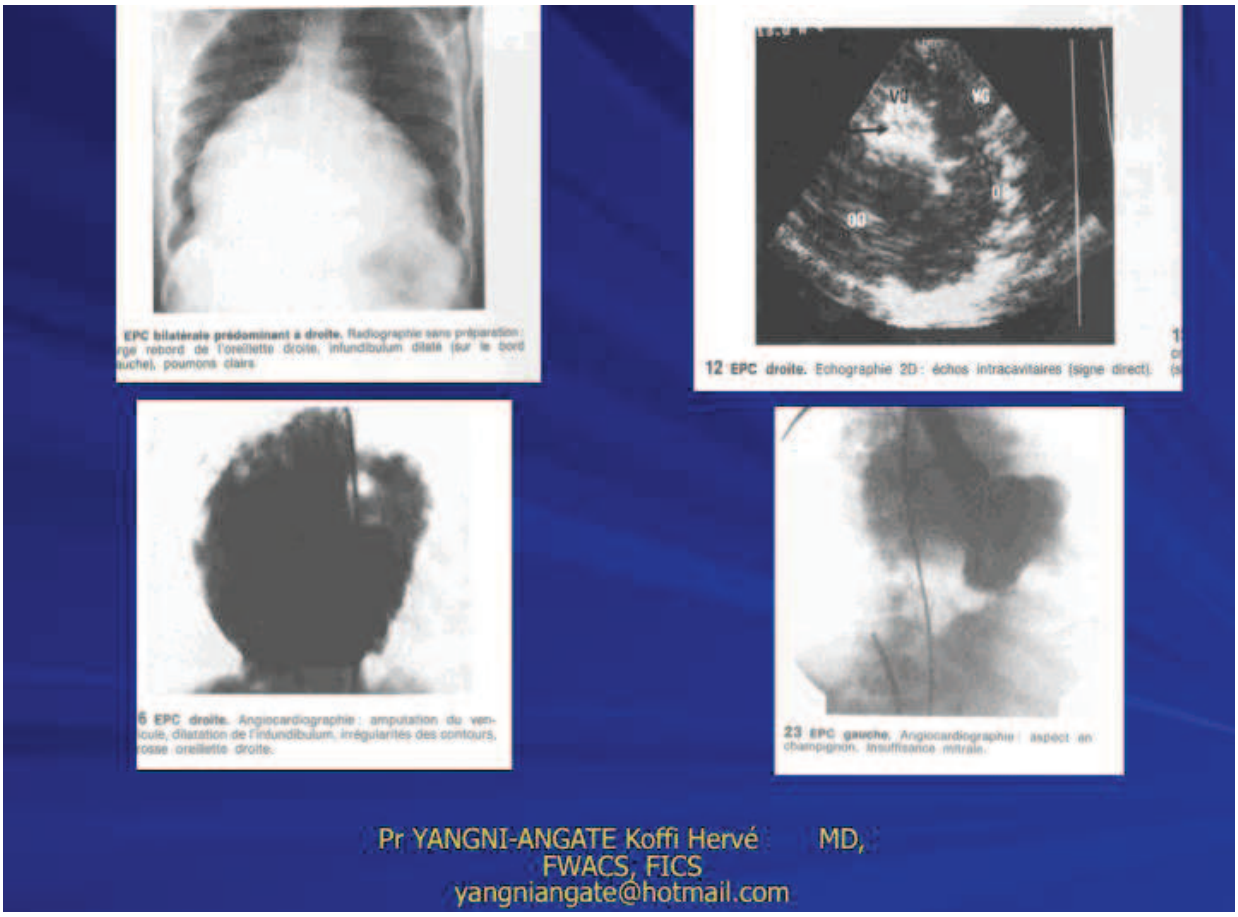

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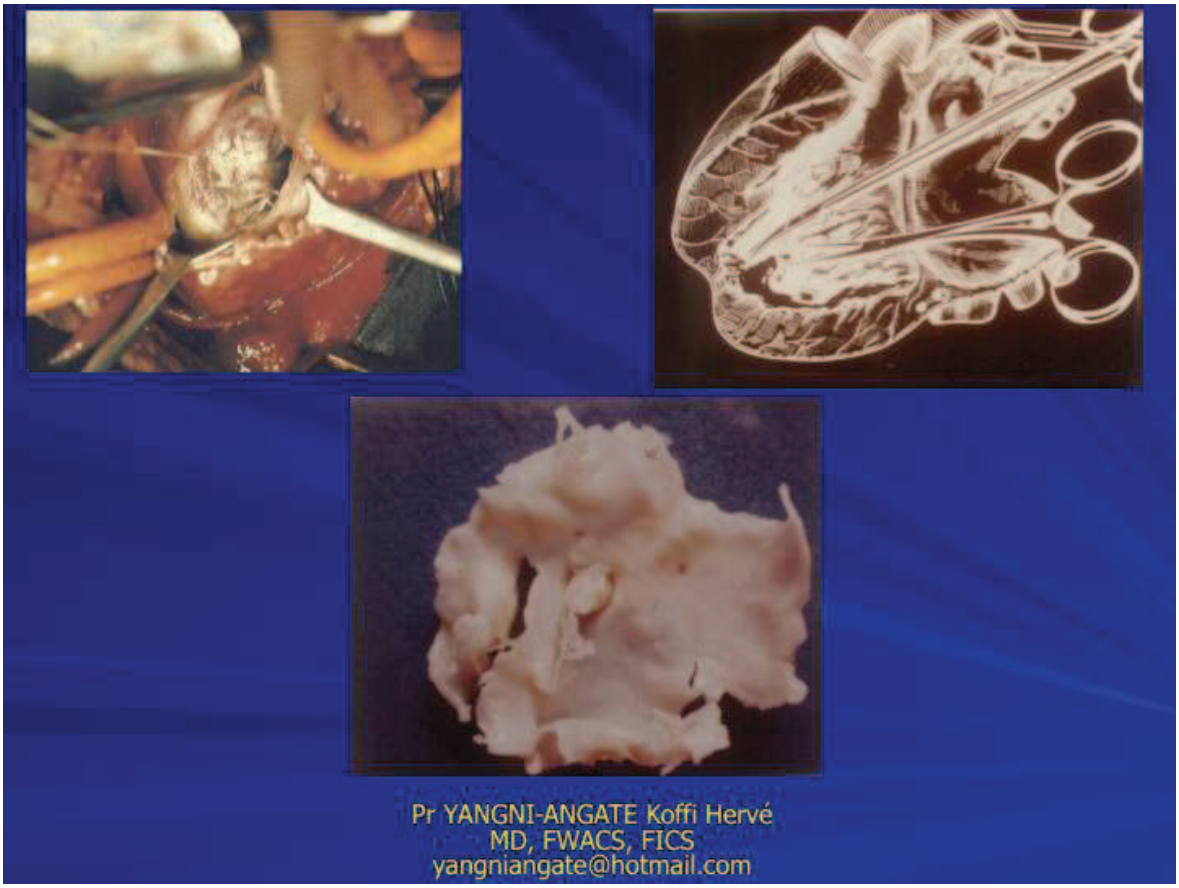

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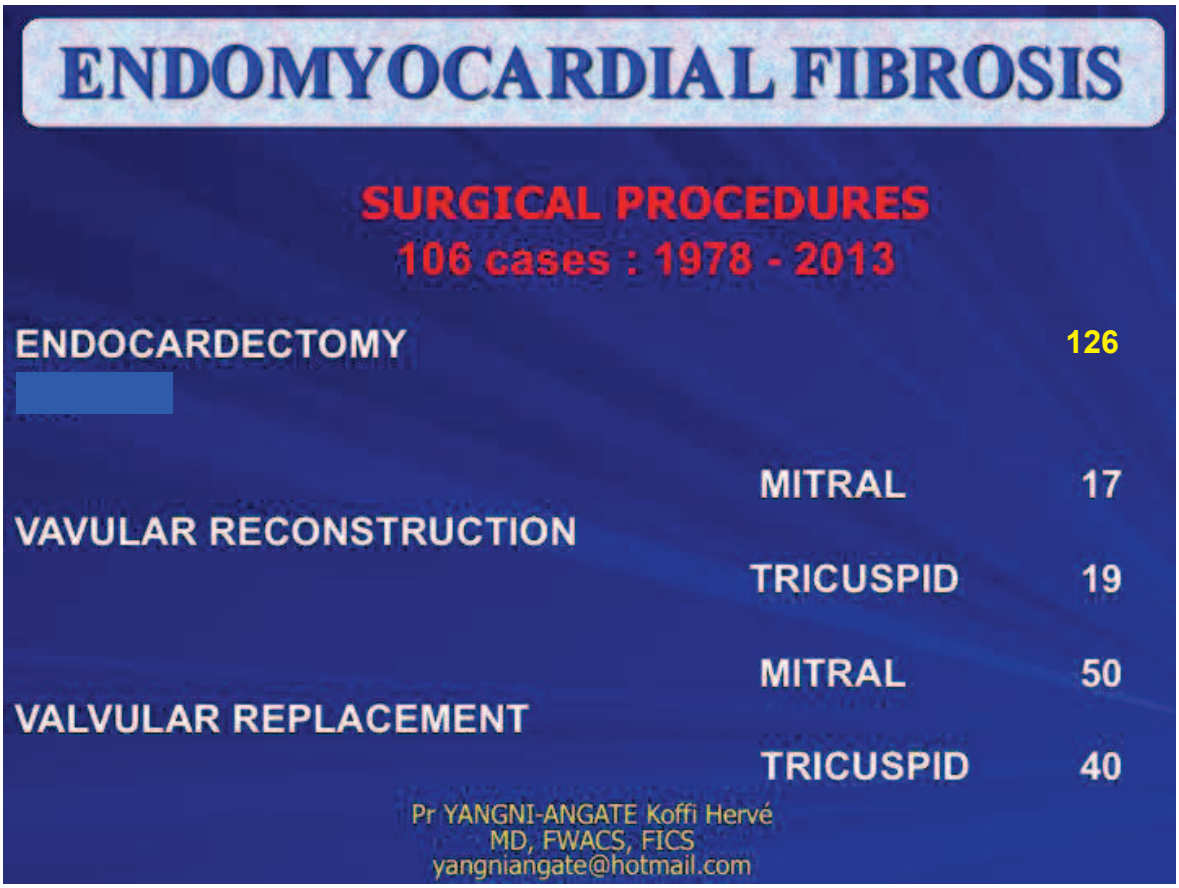

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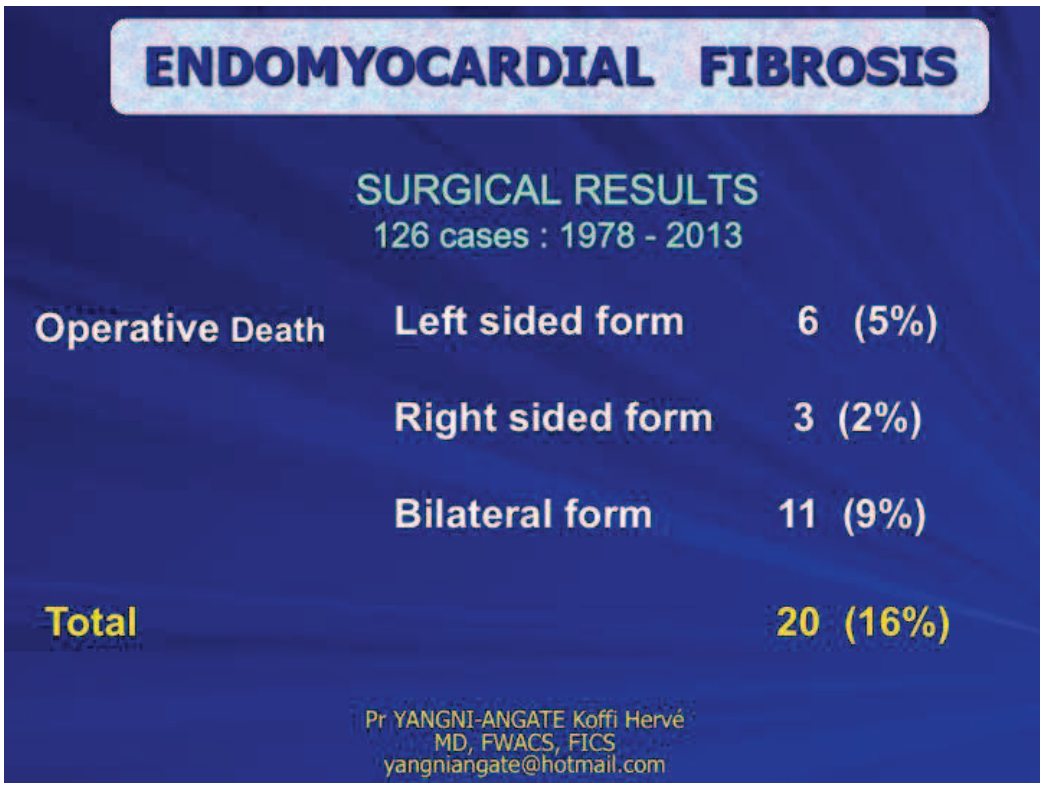
ENDOMYOCARDIAL FIBROSIS
SURGICAL RESULTS
126 cases : 1978 - 2013
Operative Death
Left sided form 6 (5%)
Right sided form 3 (2%)
Bilateral form 11 (9%)
Total 20 (16%)
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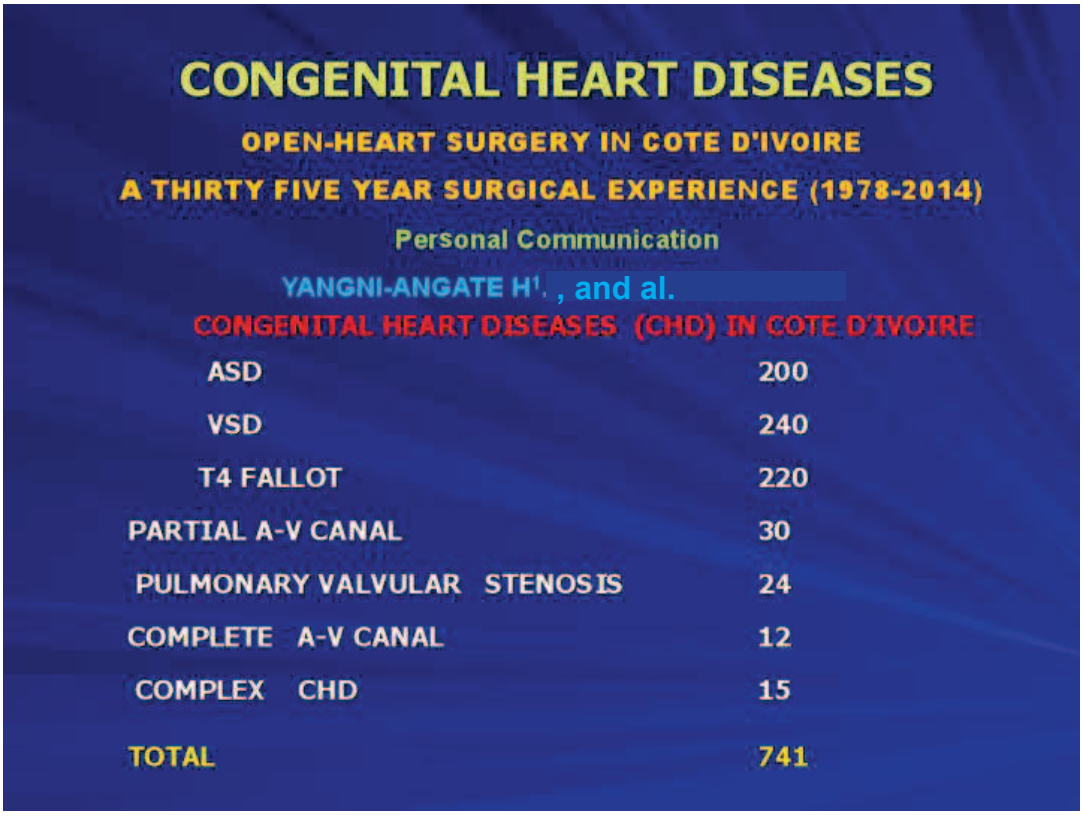
Slide 36



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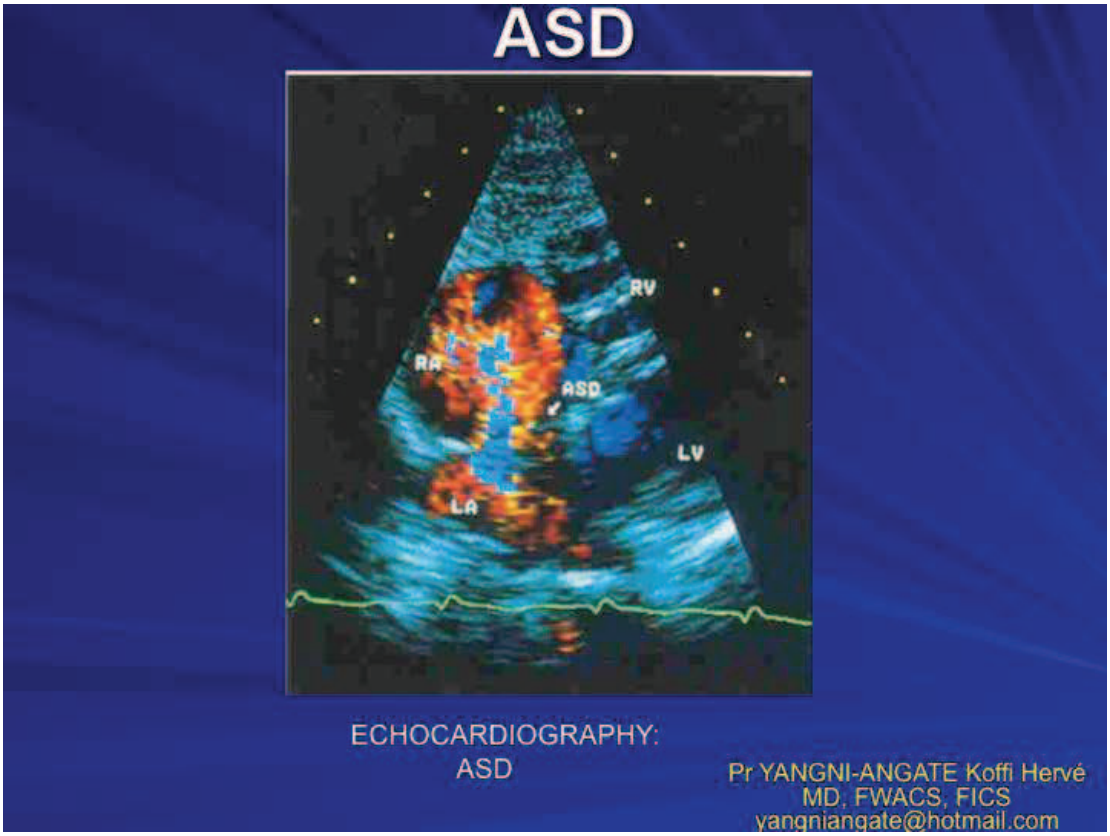

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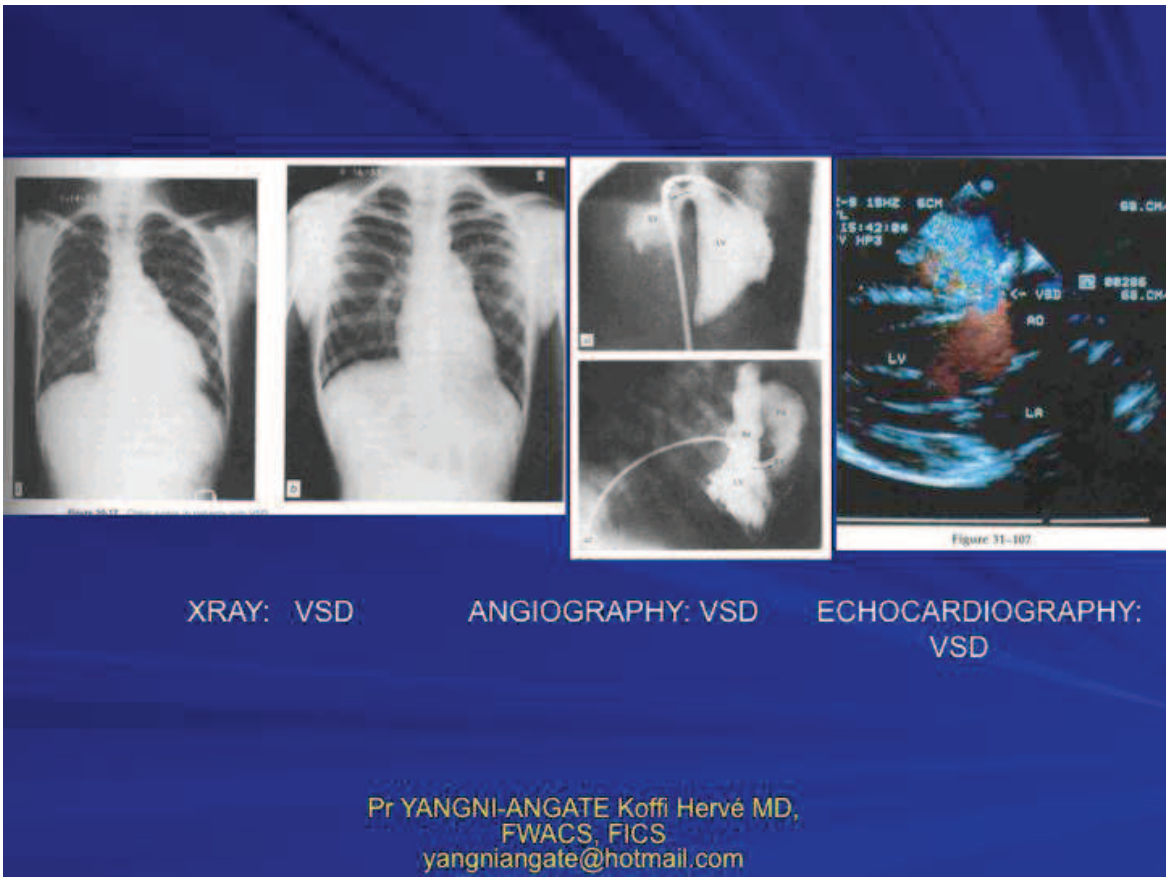

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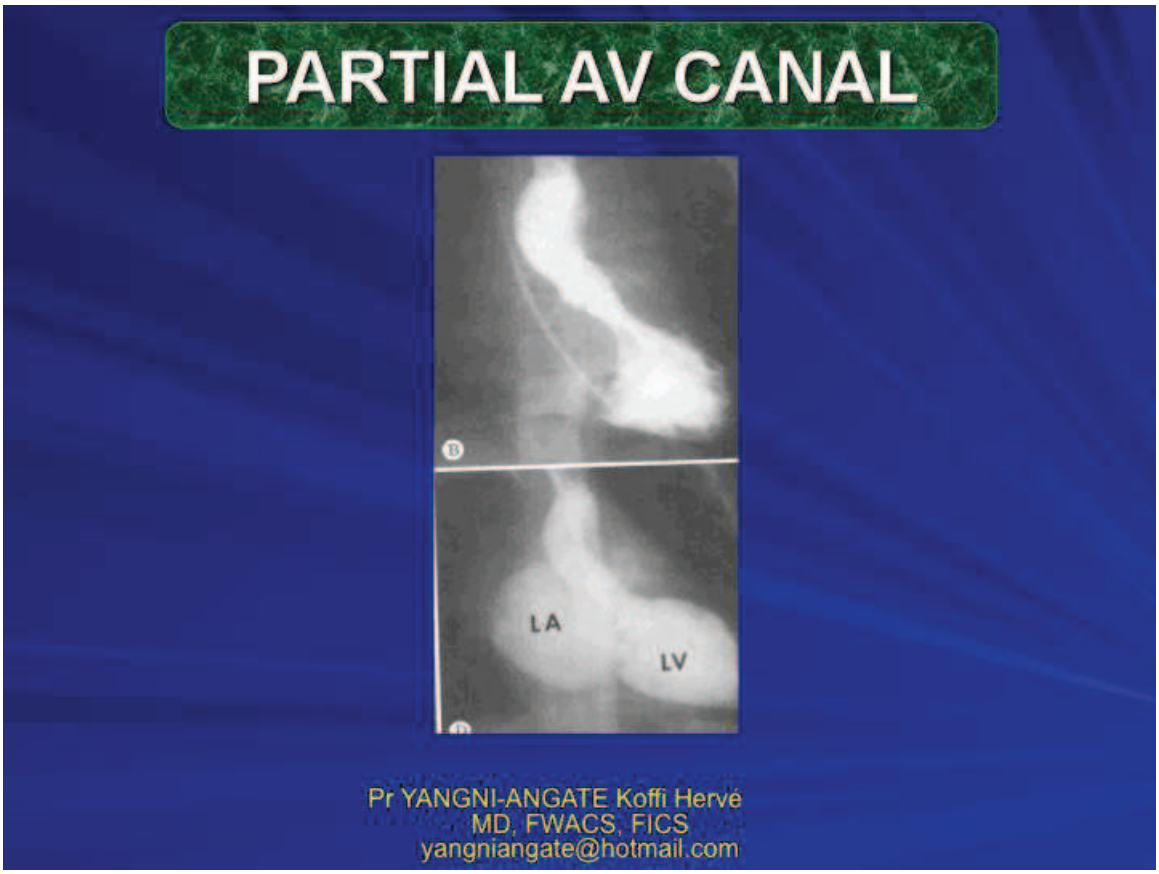

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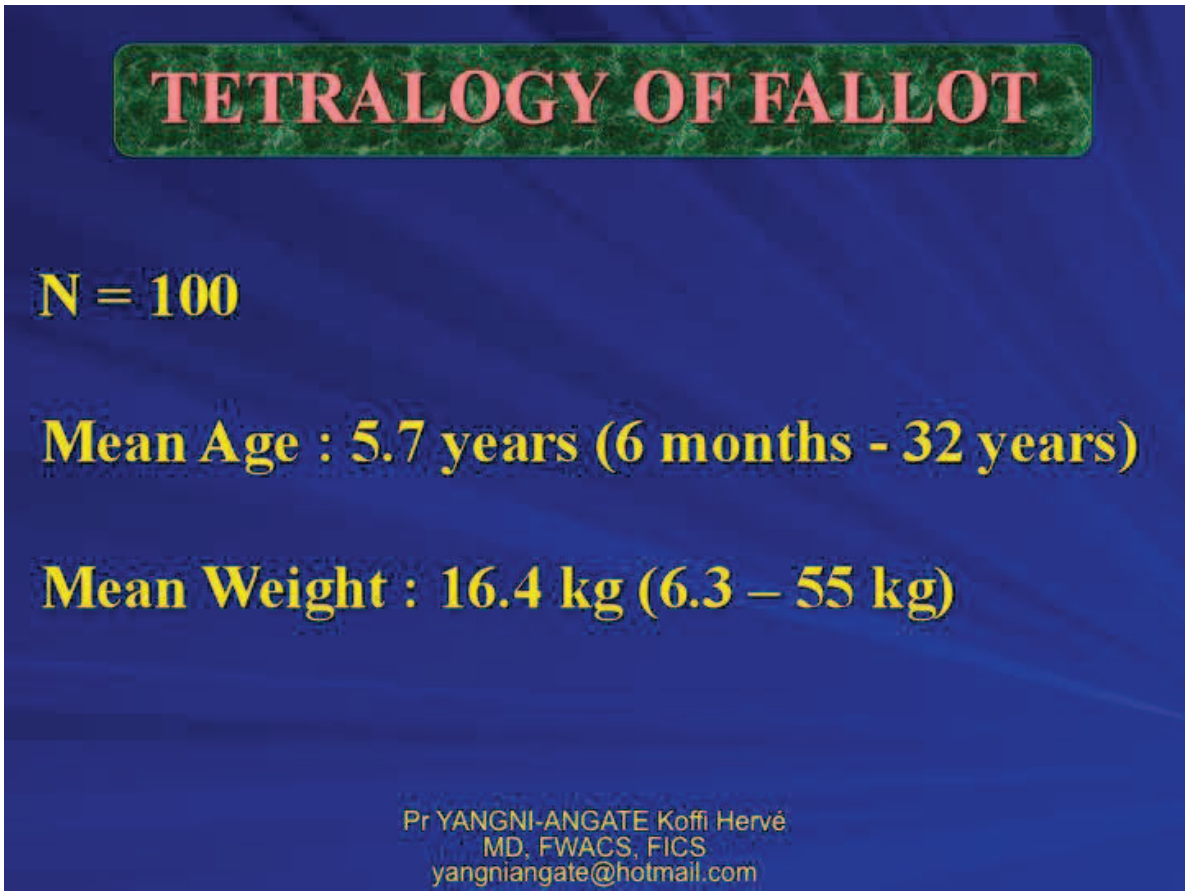

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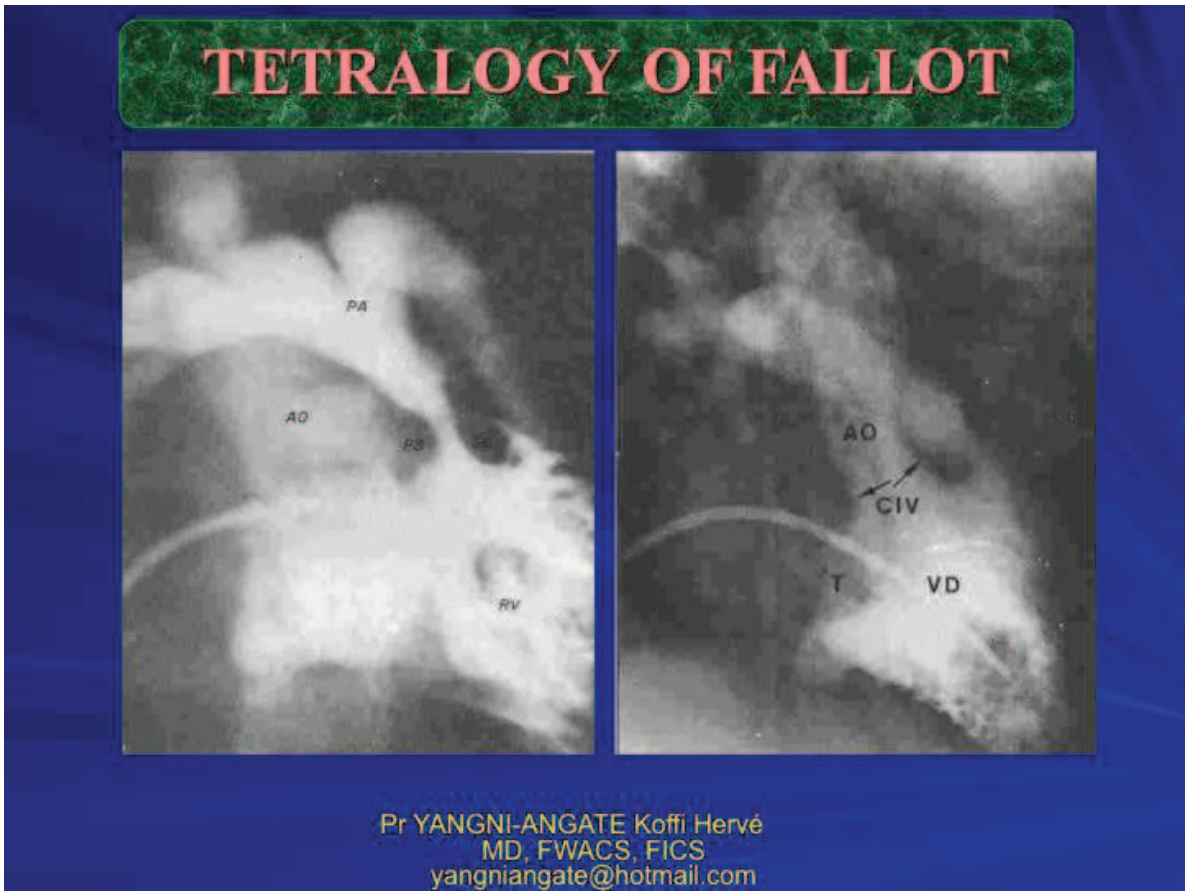

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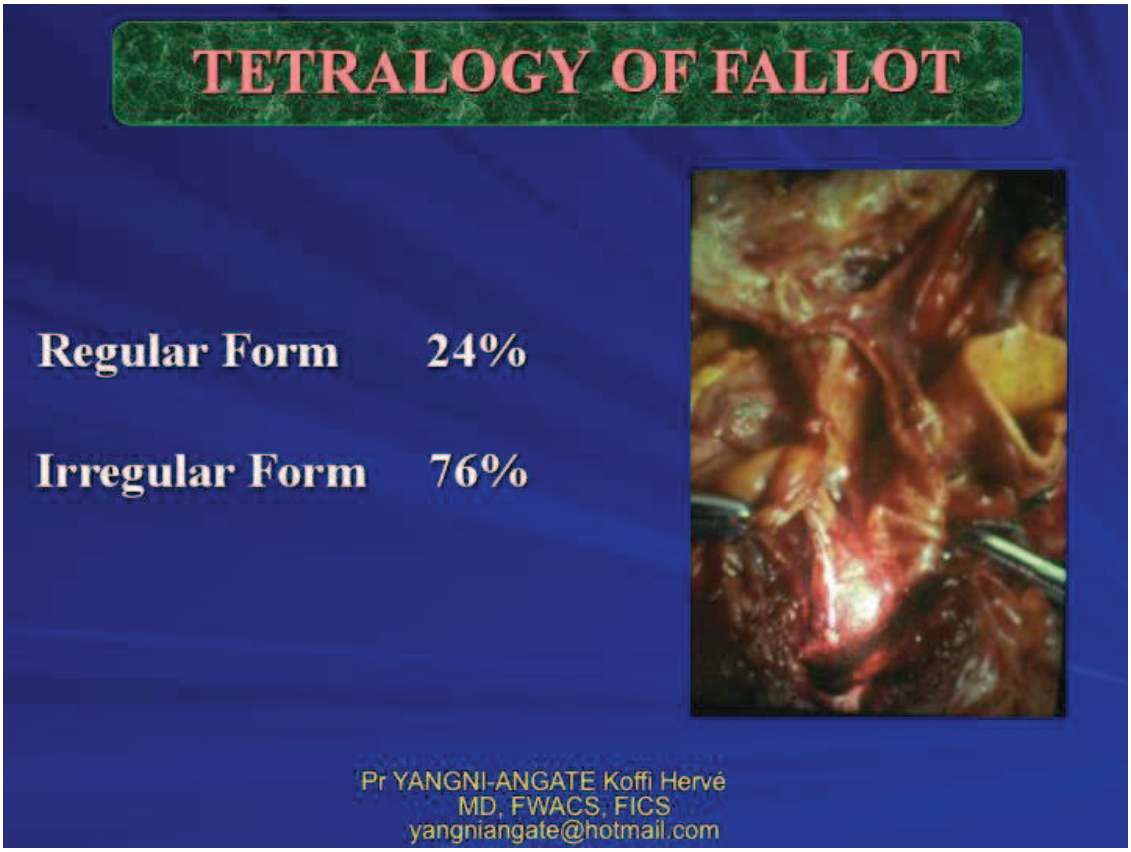

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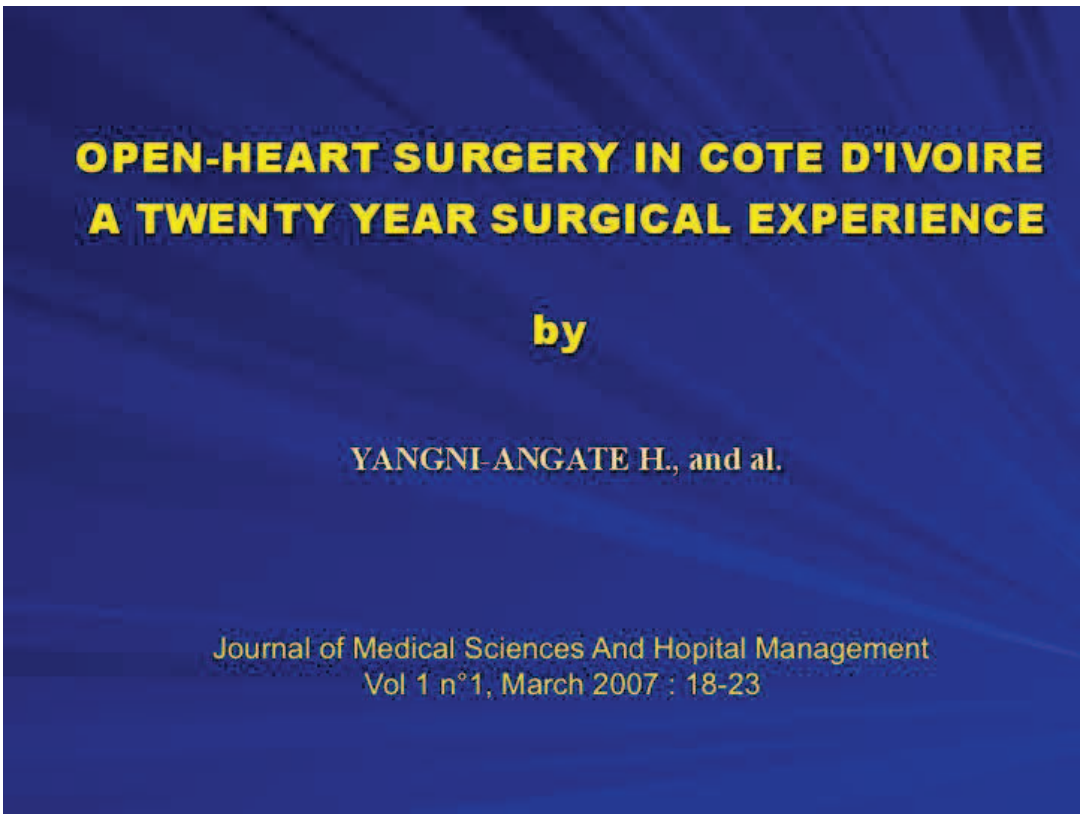

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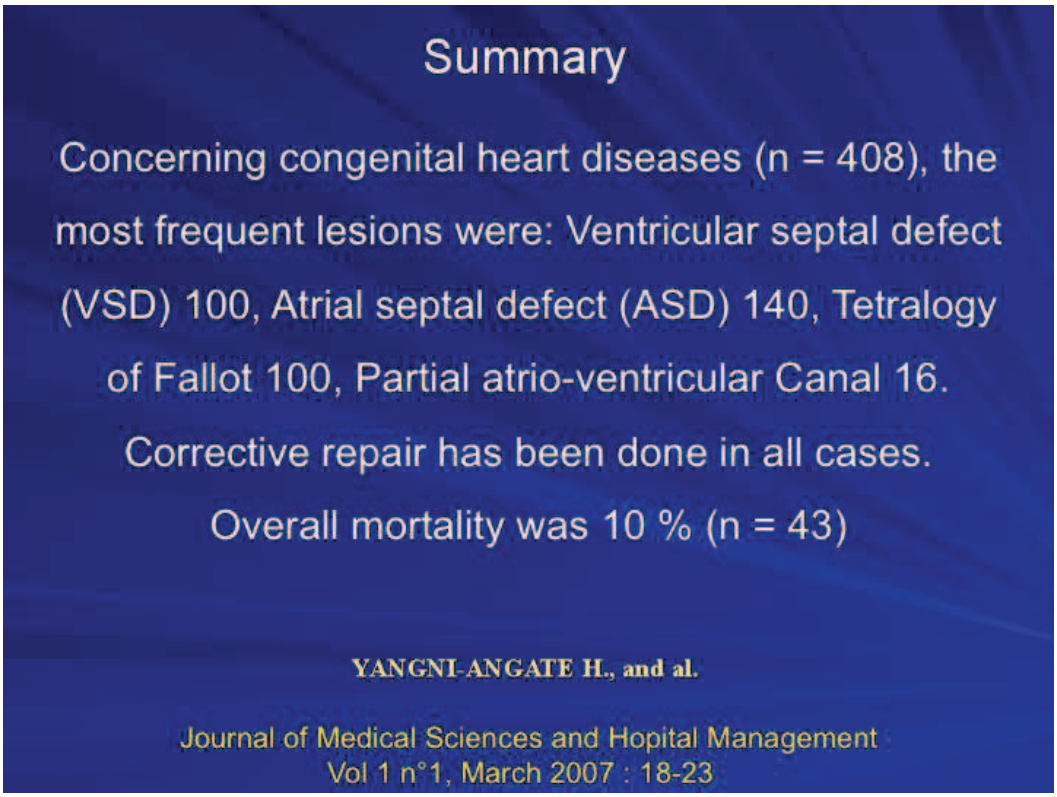

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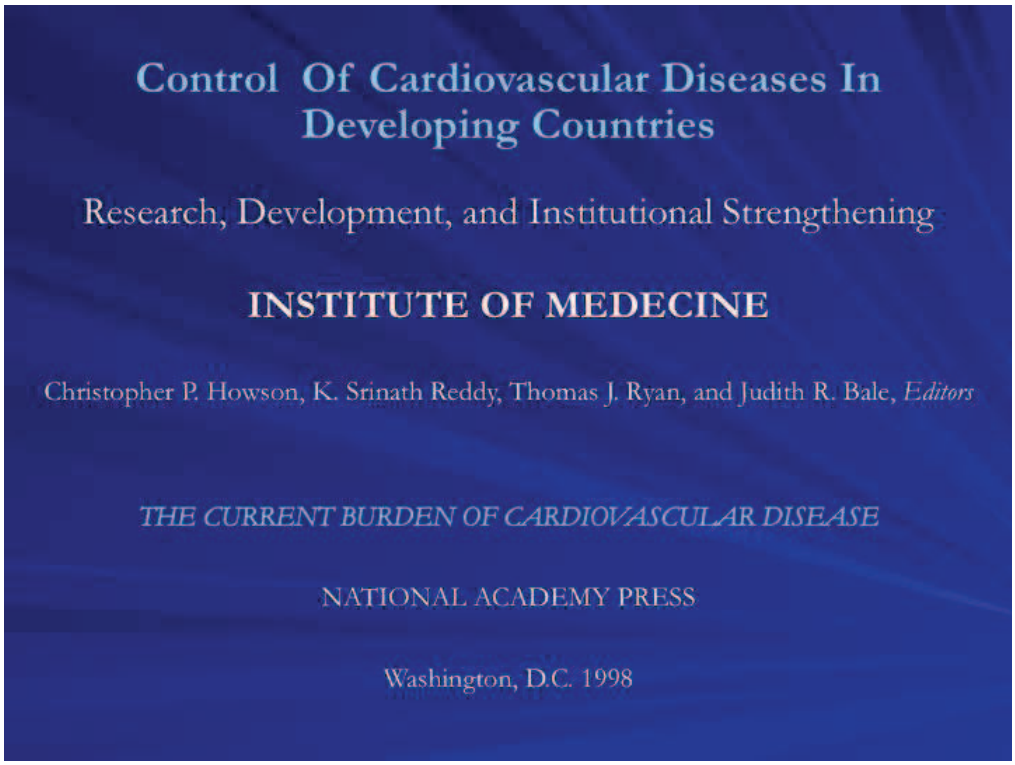

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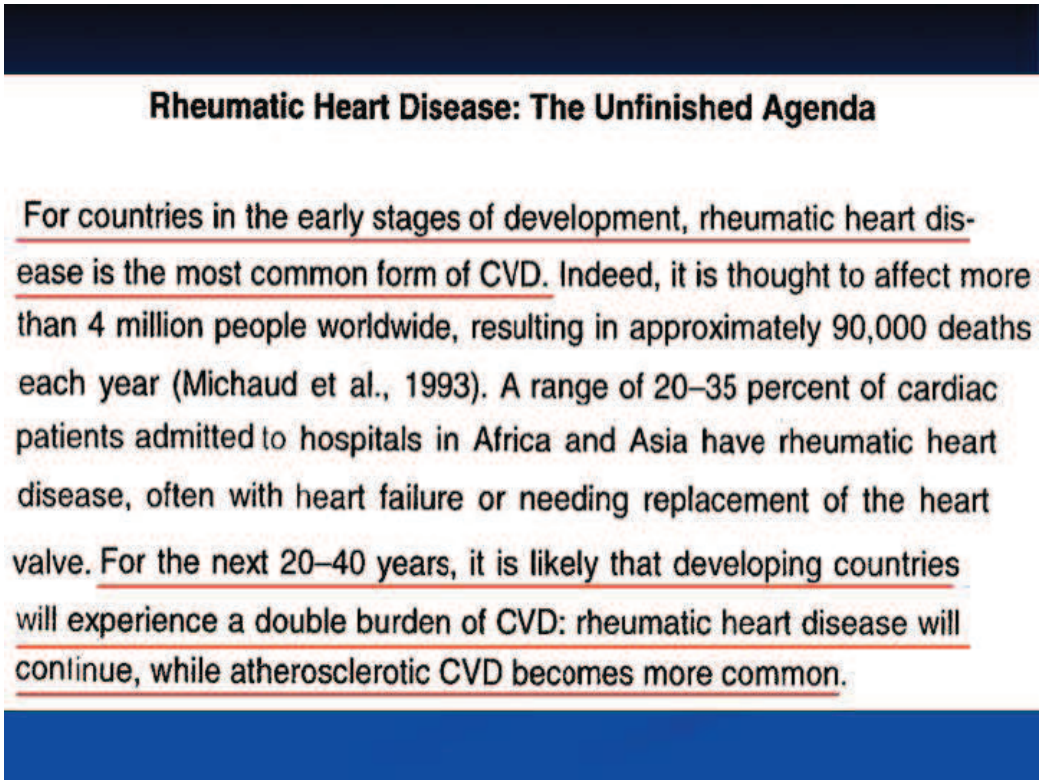

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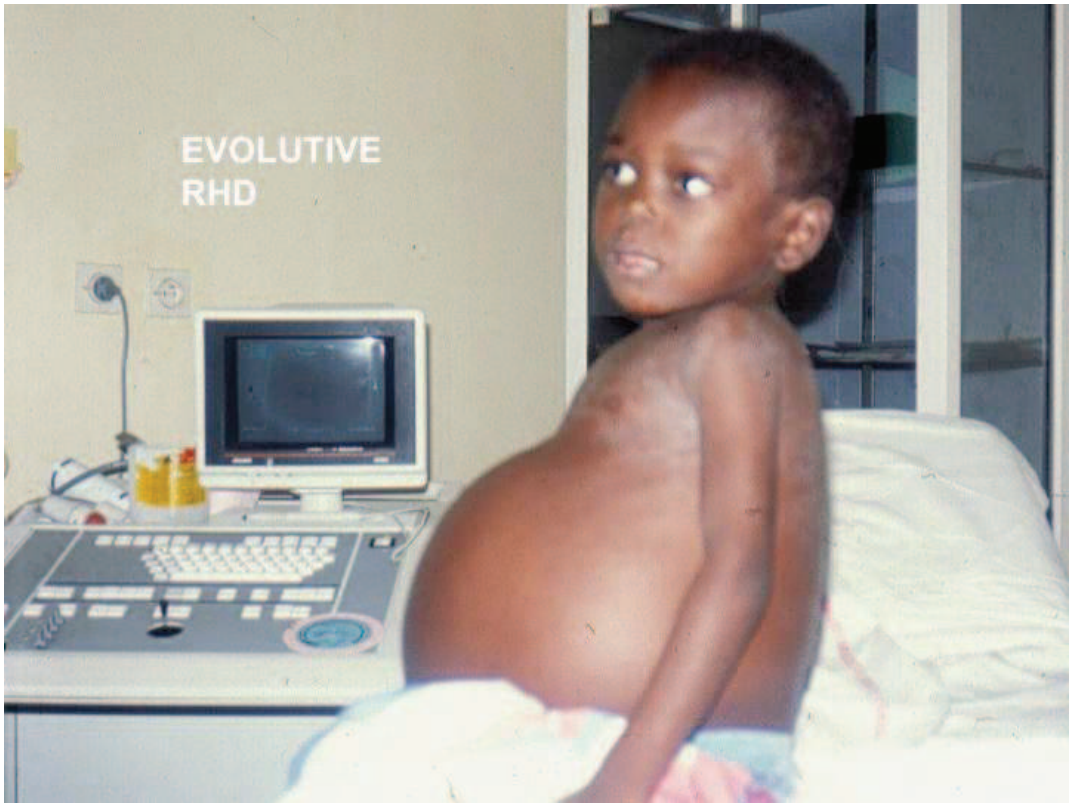

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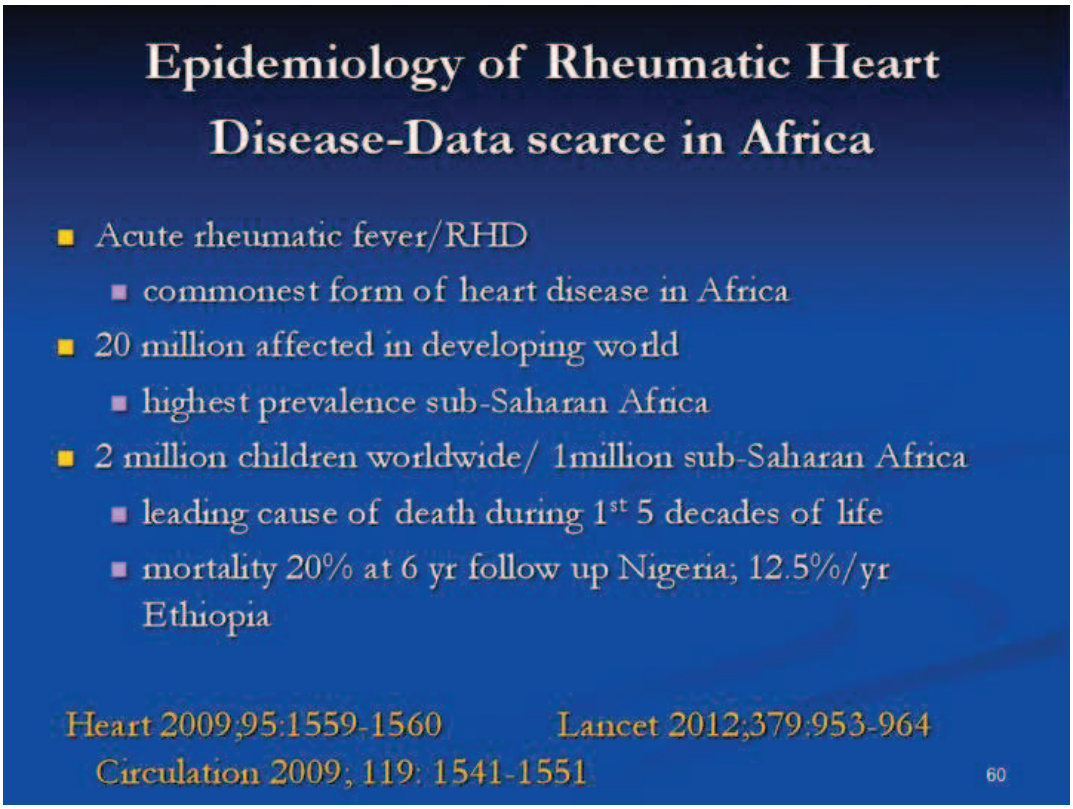

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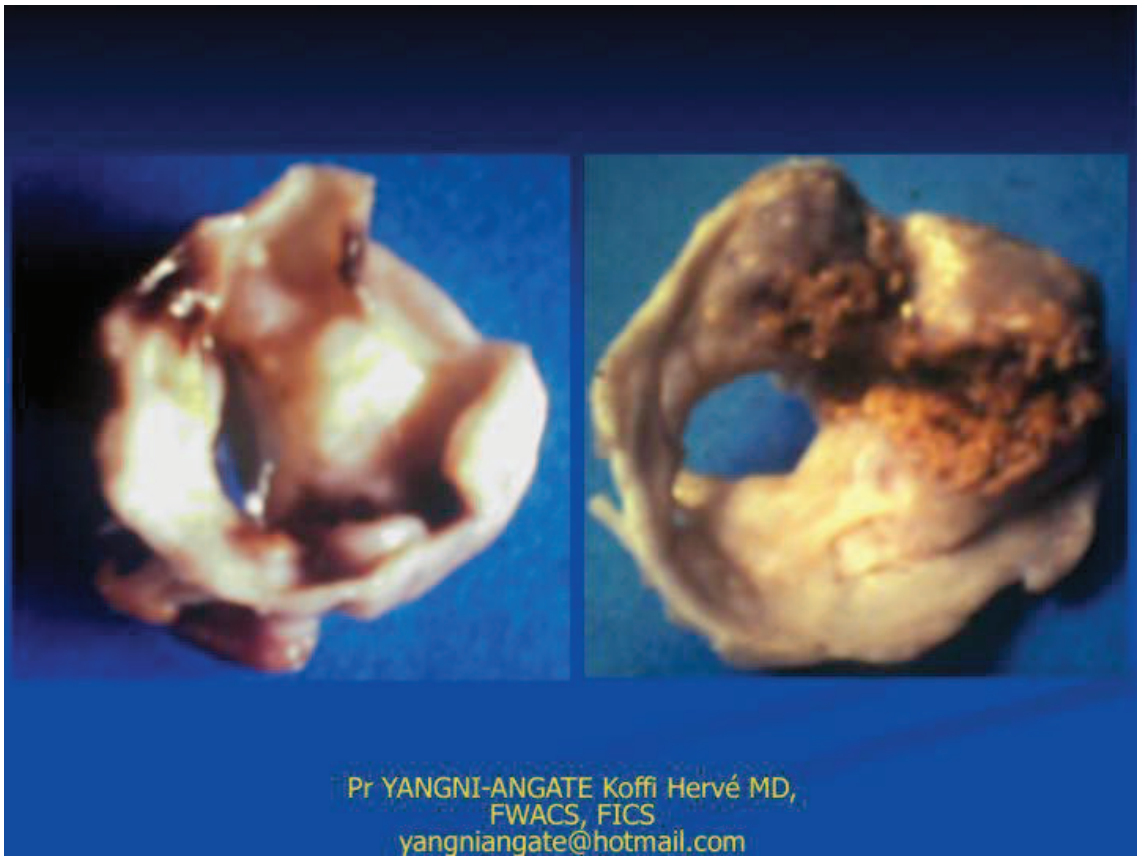

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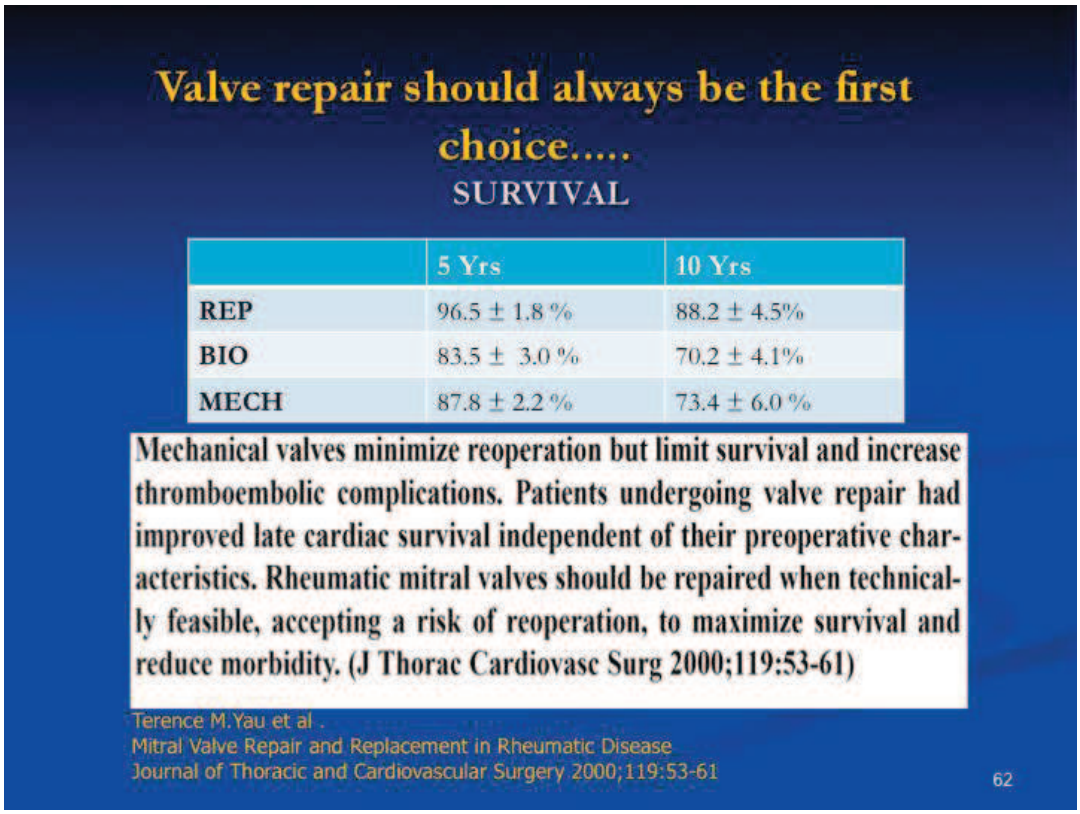

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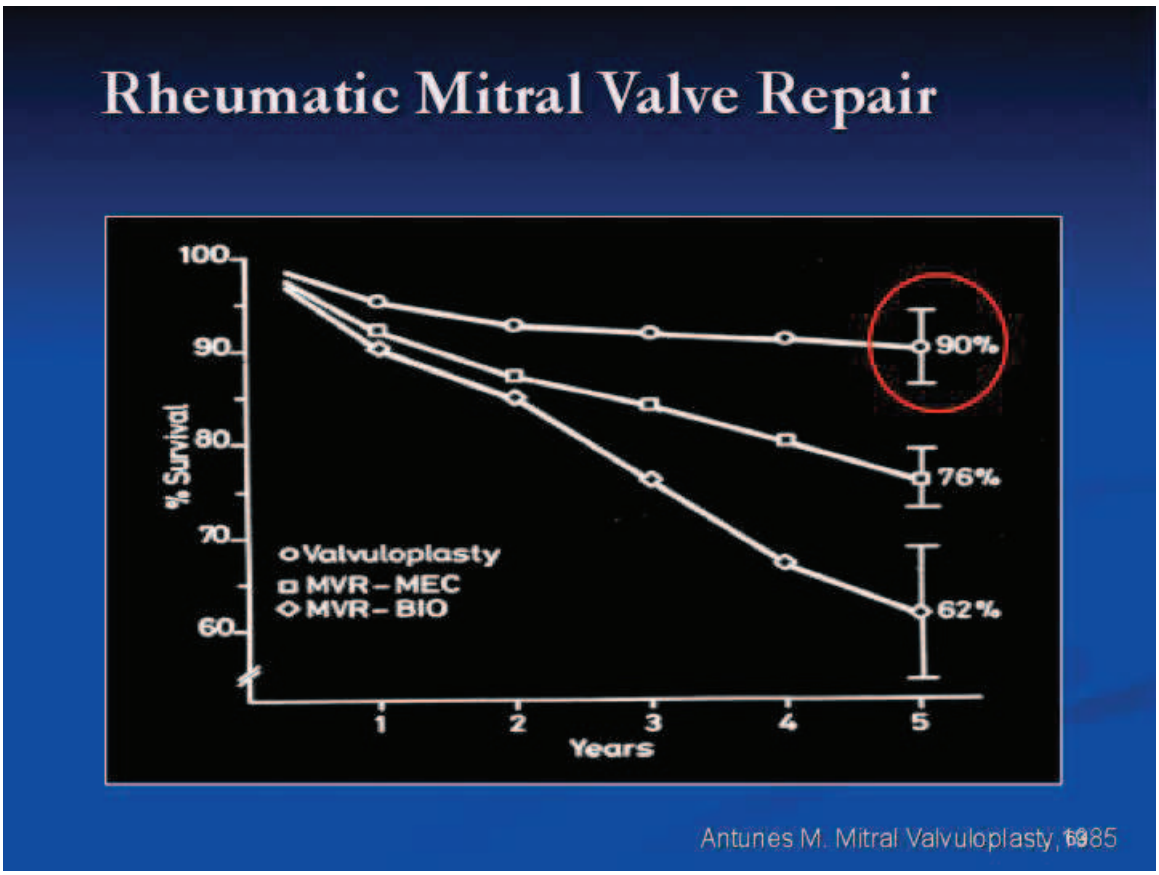

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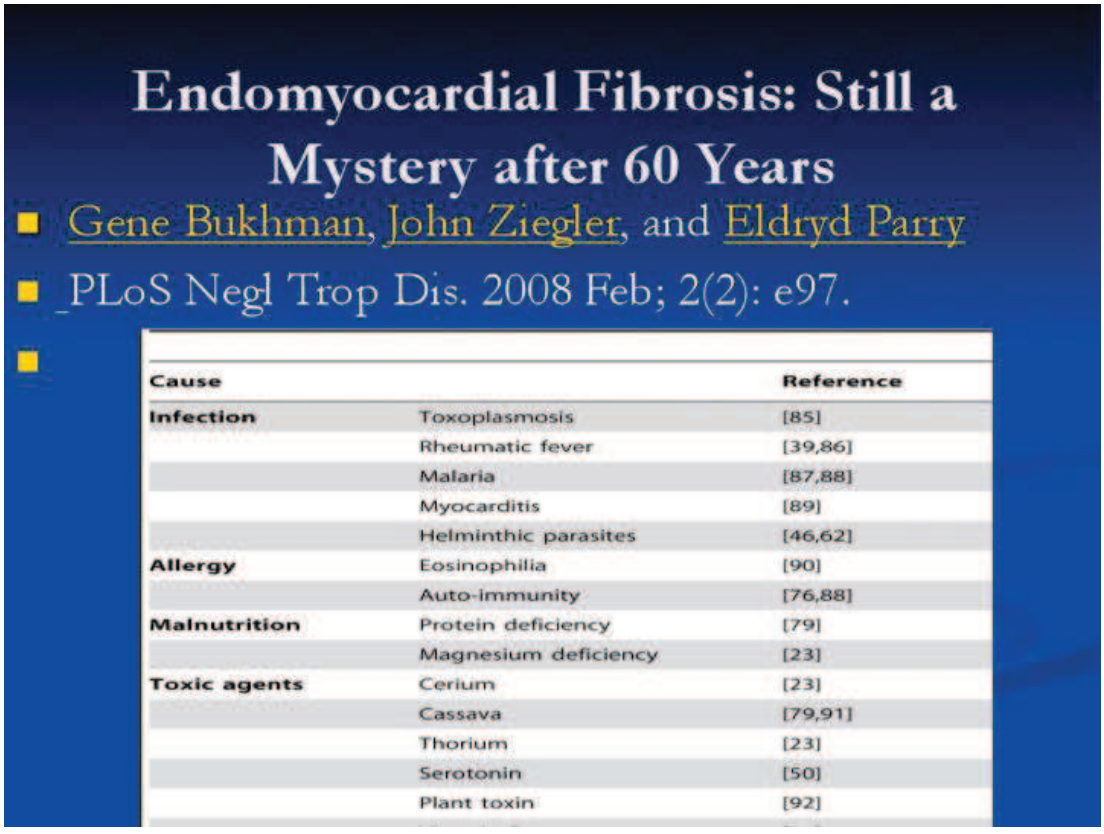

Cause		Reference
Infection	Toxoplasmosis	[85]
	Rheumatic fever	[39,86]
	Malaria	[87,88]
	Myocarditis	[89]
	Helminthic parasites	[46,62]
Allergy	Eosinophilia	[90]
	Auto-immunity	[76,88]
Malnutrition	Protein deficiency	[79]
	Magnesium deficiency	[23]
Toxic agents	Cerium	[23]
	Cassava	[79,91]
	Thorium	[23]
	Serotonin	[50]
	Plant toxin	[92]

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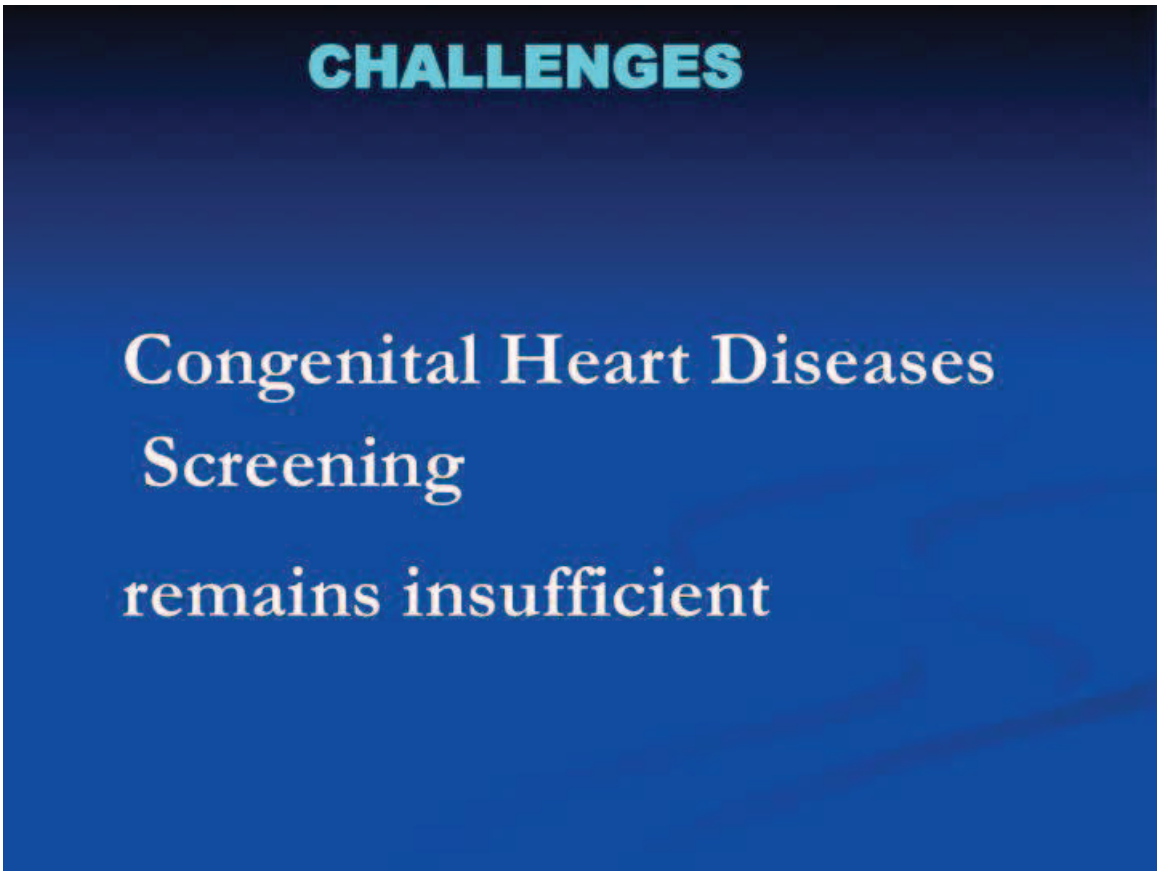

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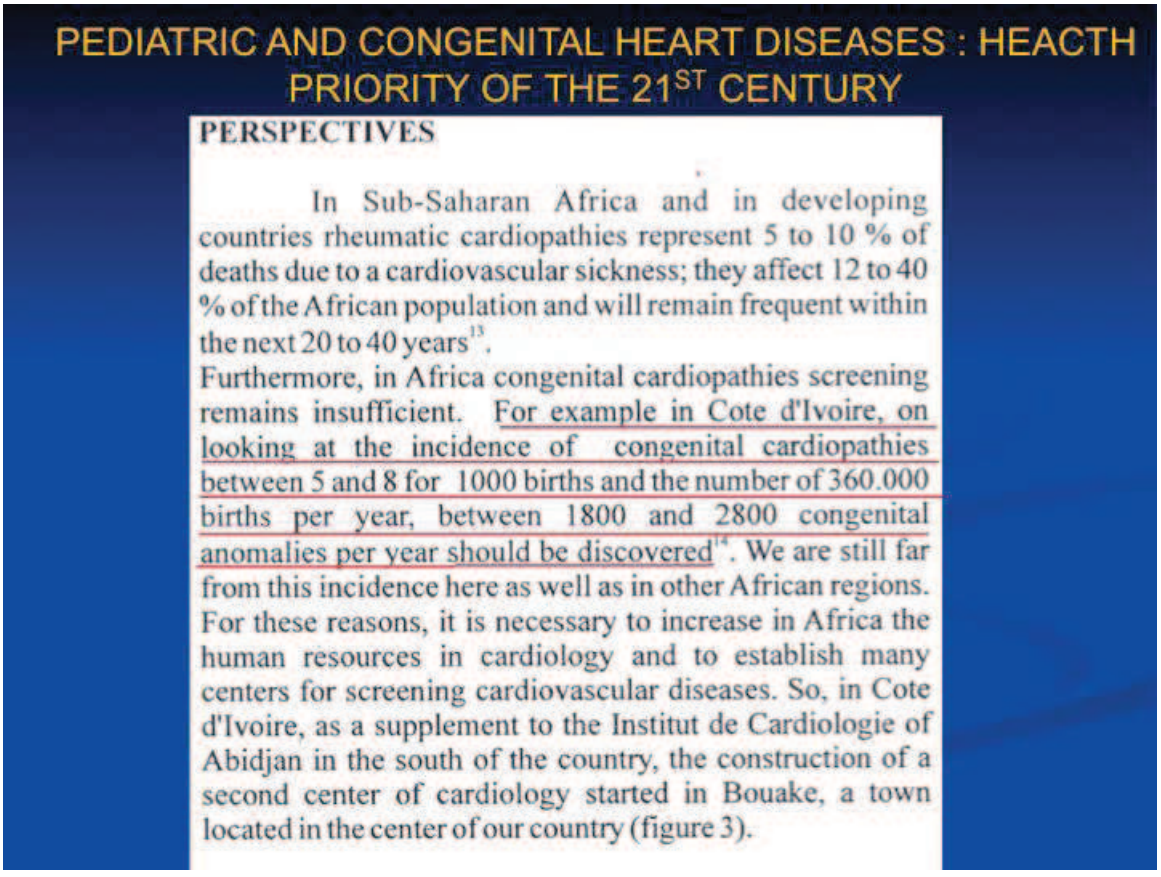

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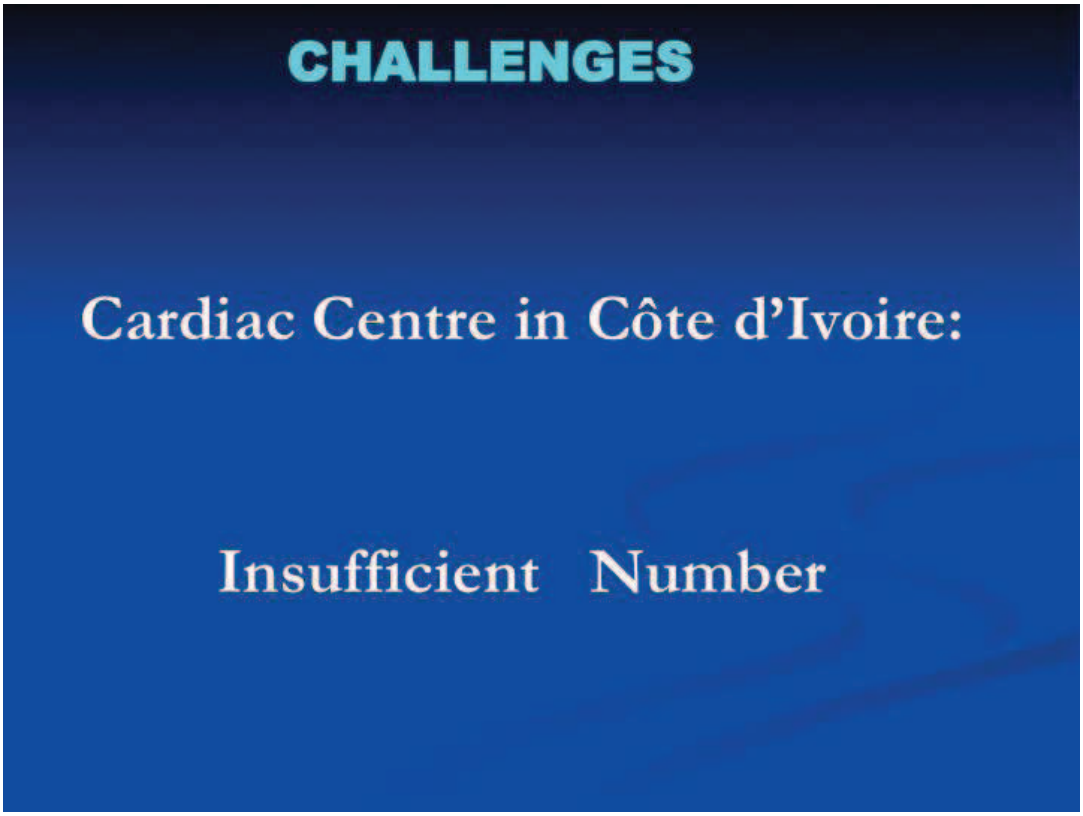

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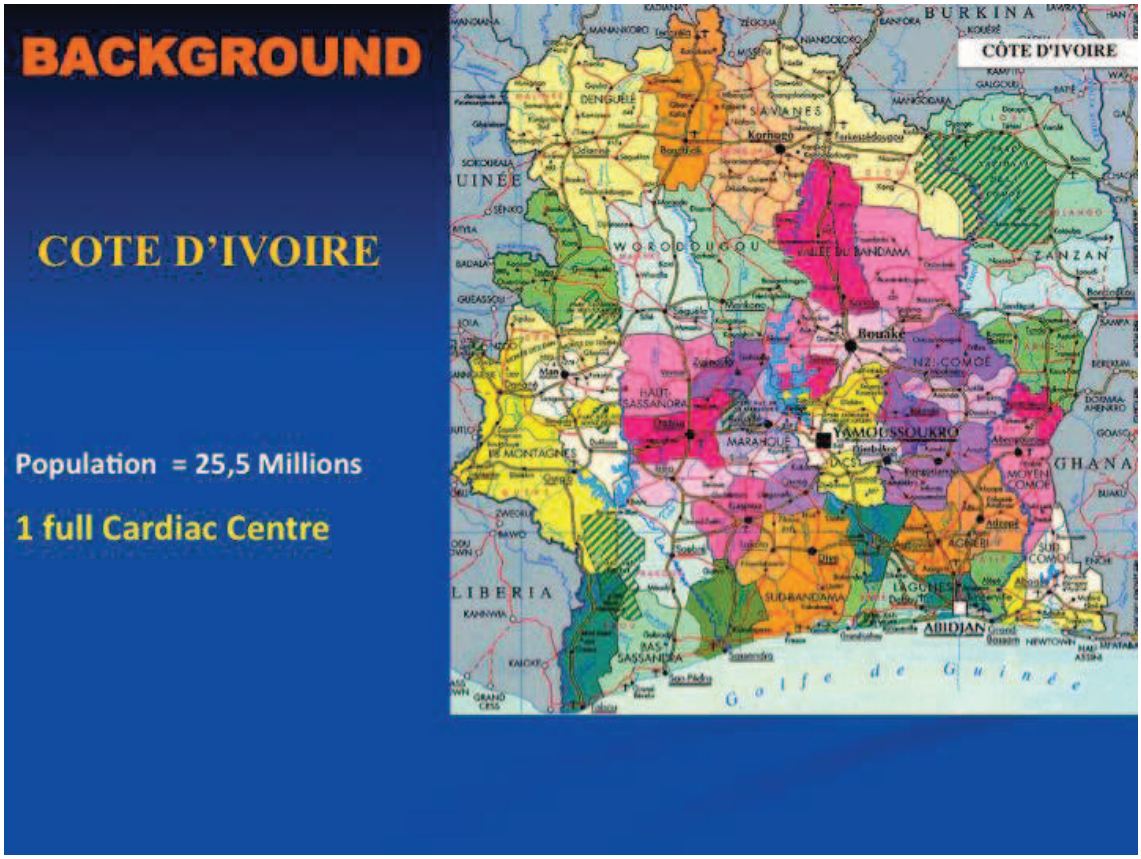

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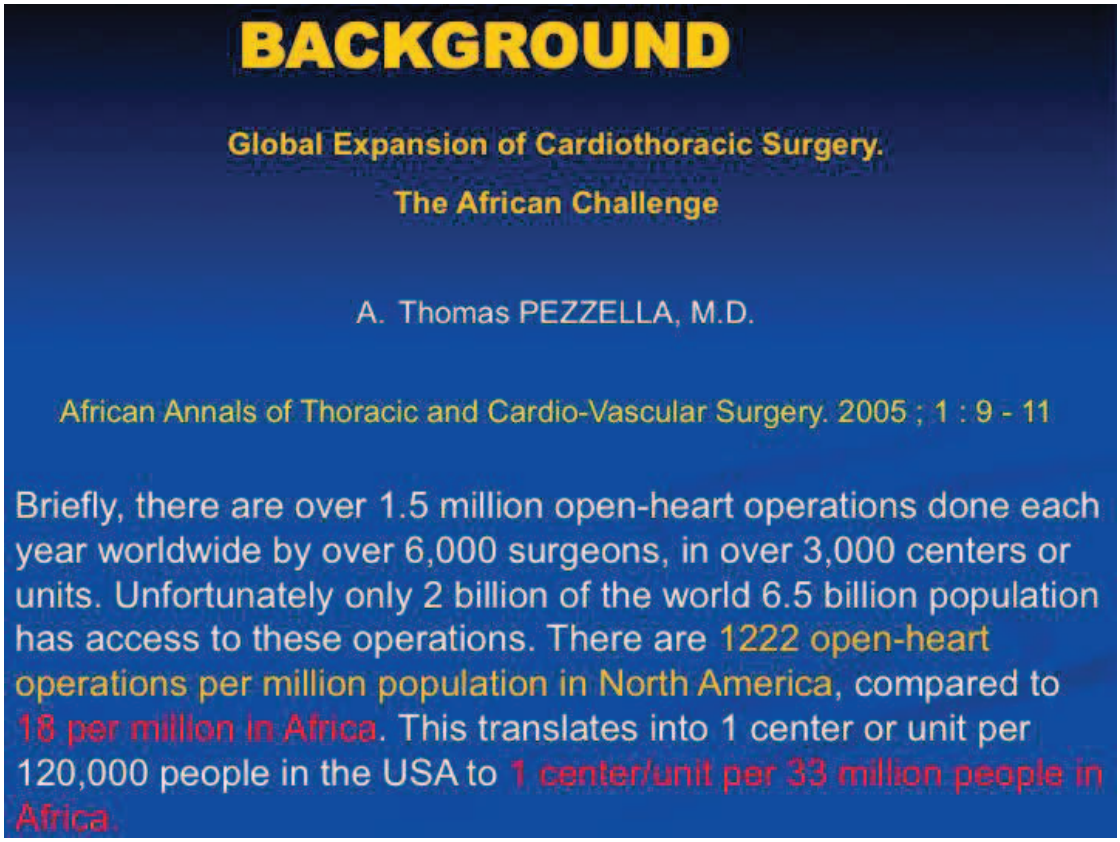

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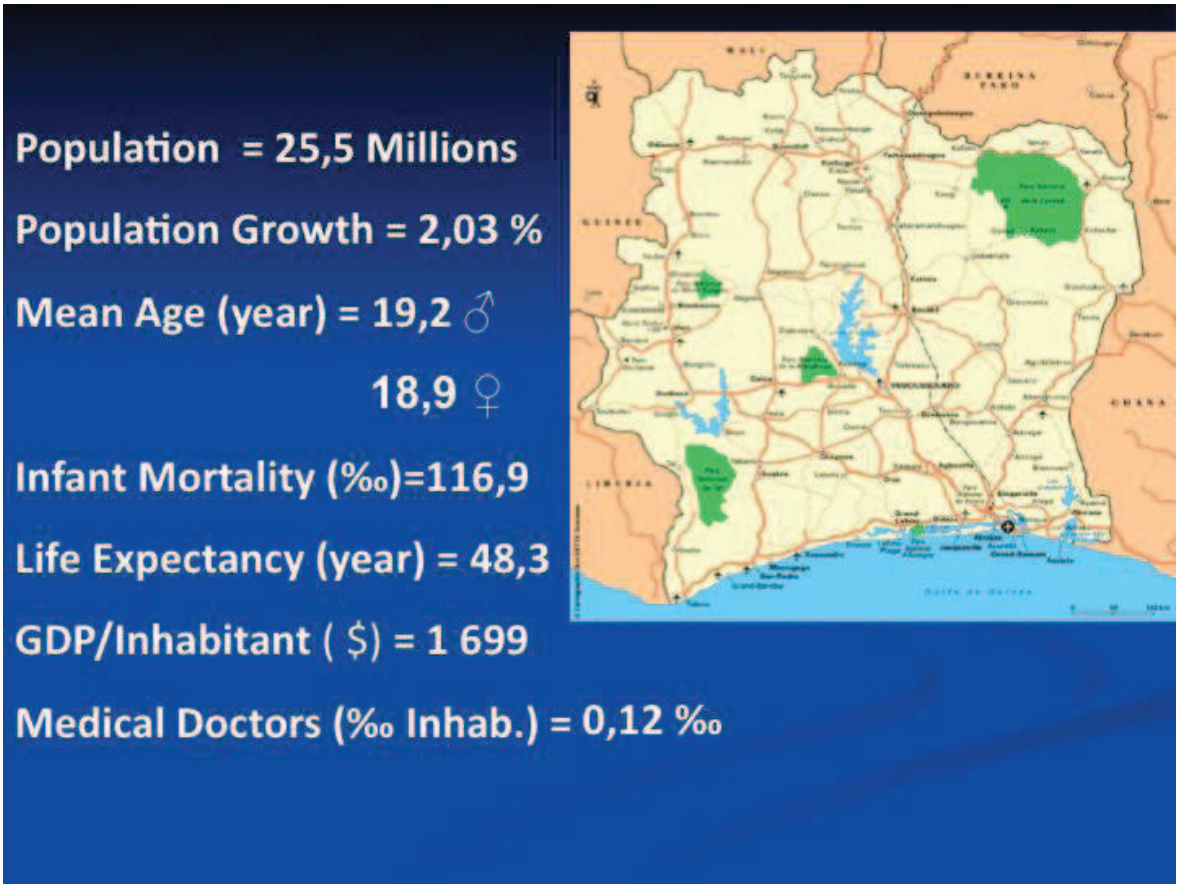

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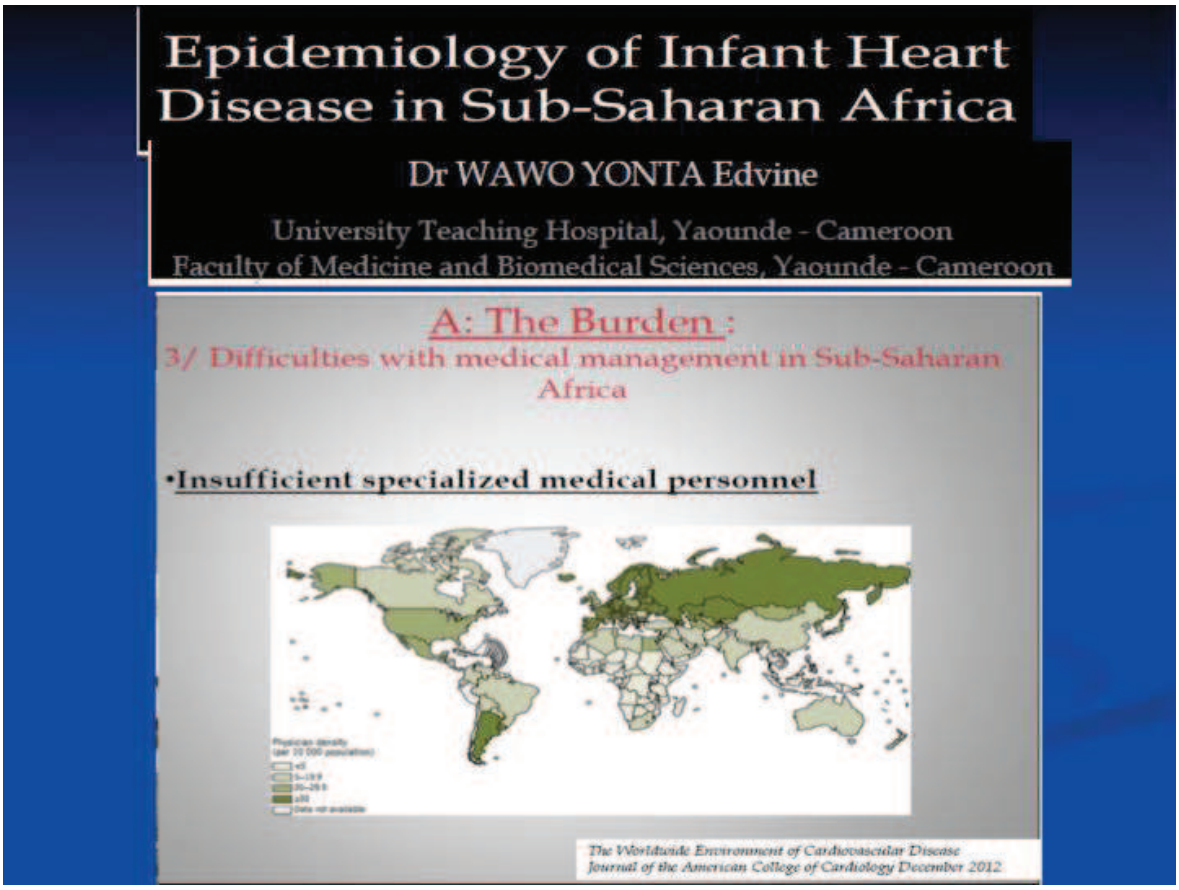

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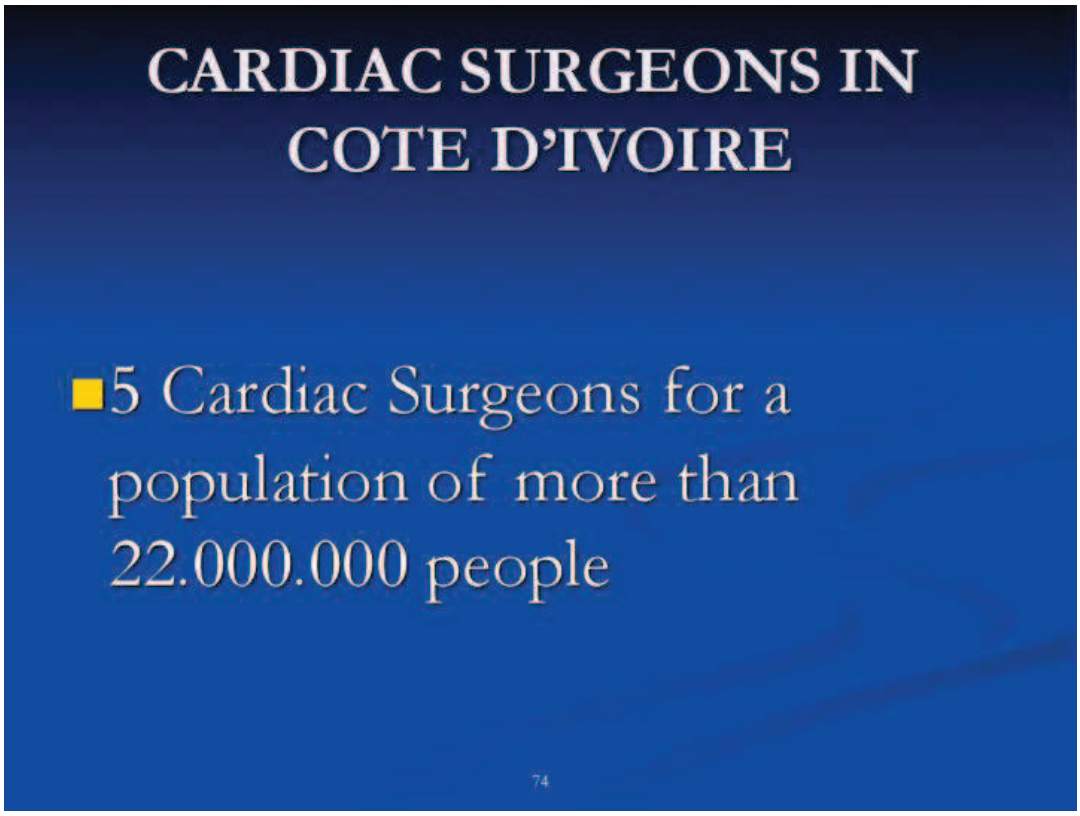

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CARDIOTHORACIC SURGEONS AT POST AND PROJECTED IMMEDIATE NEEDS IN 7 COUNTRIES

COUNTRY	CARDIOTHORACIC SURGEONS AT POST	PROJECTED IMMEDIATE NEEDS
GHANA population: 20 million	4	20
NIGERIA Population: 126.6 million	10	40
BENIN Population: 6.6 million	0	7
MALI Population: 11.5 million	0	12
THE GAMBIA Population: 1.4 million	2	2
SIERRA LEONE Population: 1.4 million	0	6
LIBERIA Population: 3.2 million	0	4

The immediate National needs of Specialists based on a ratio of 1: 22.000 population.

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Countries with established Cardiac surgery programs

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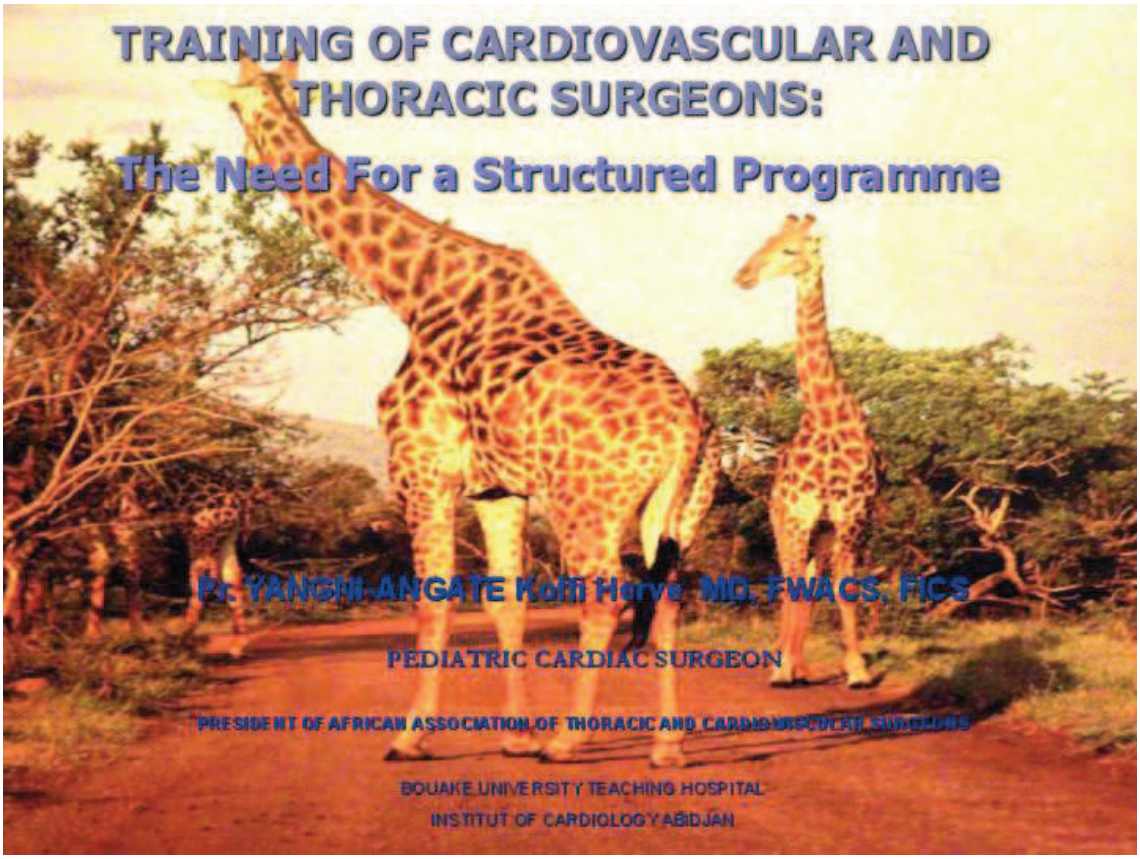

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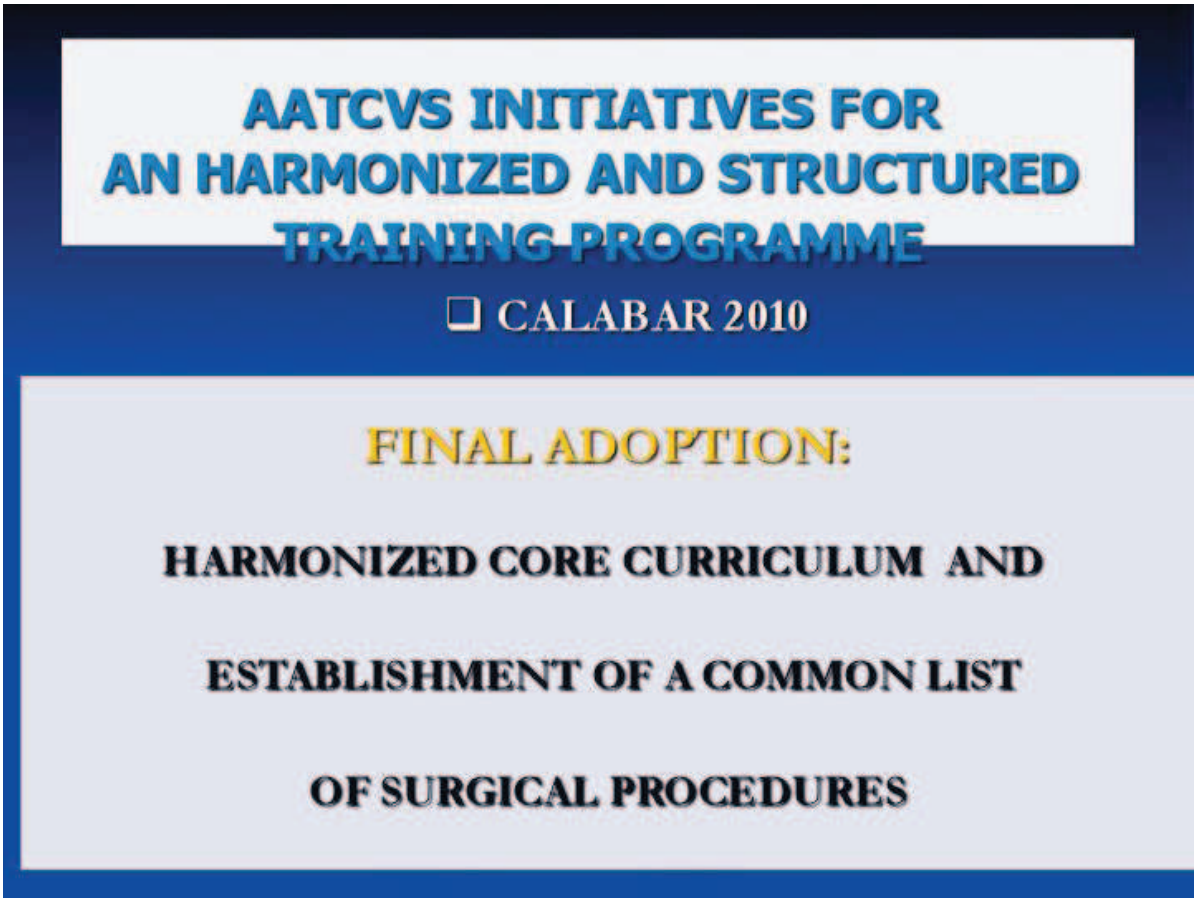

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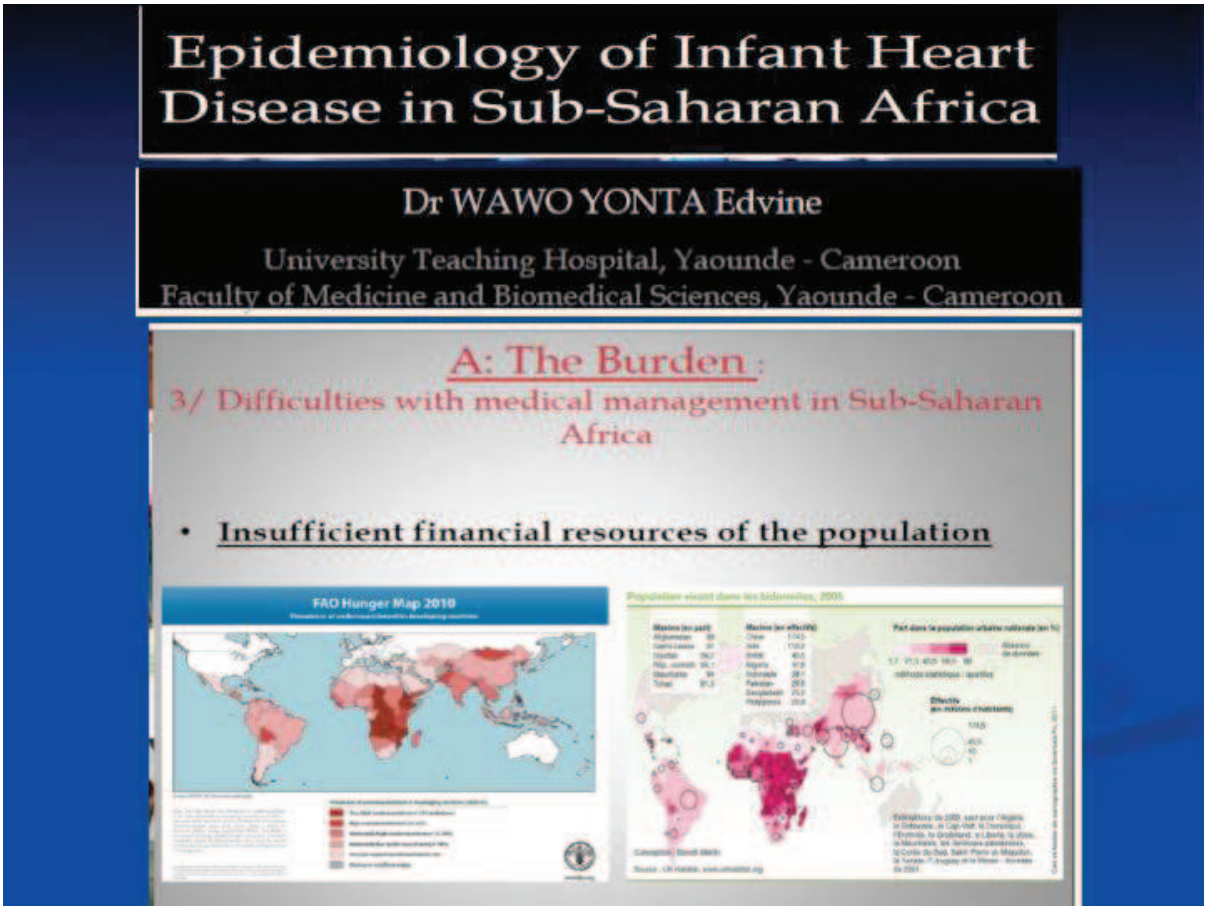

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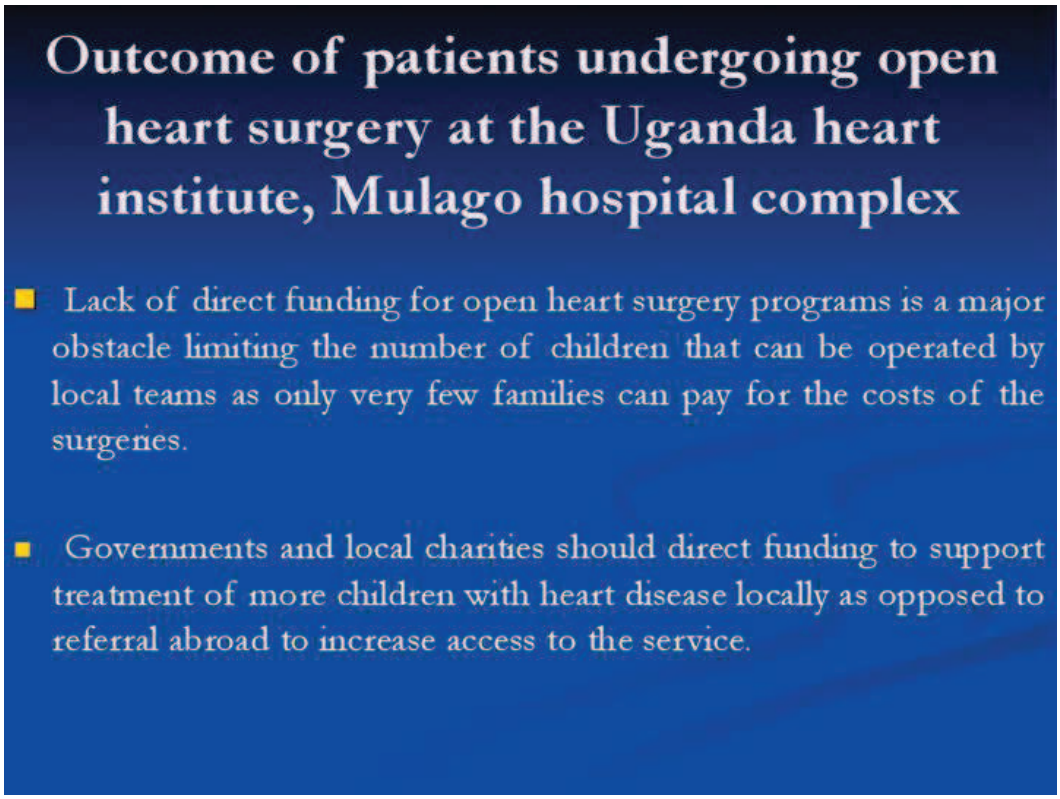

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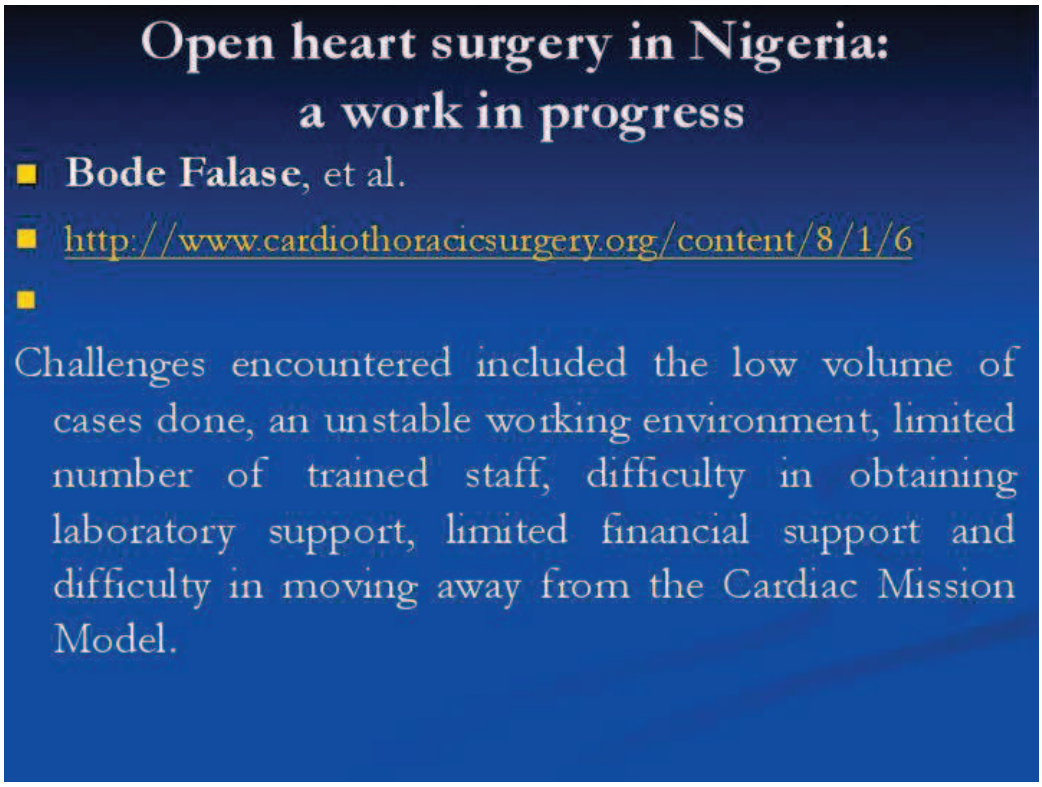

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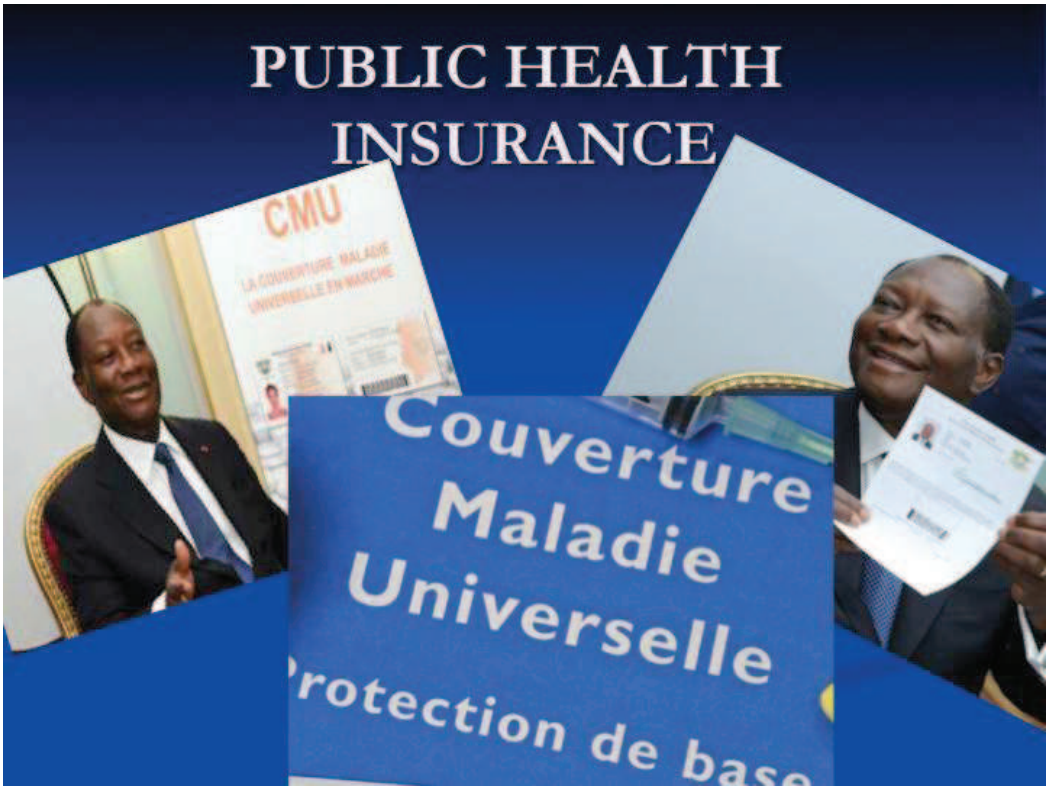

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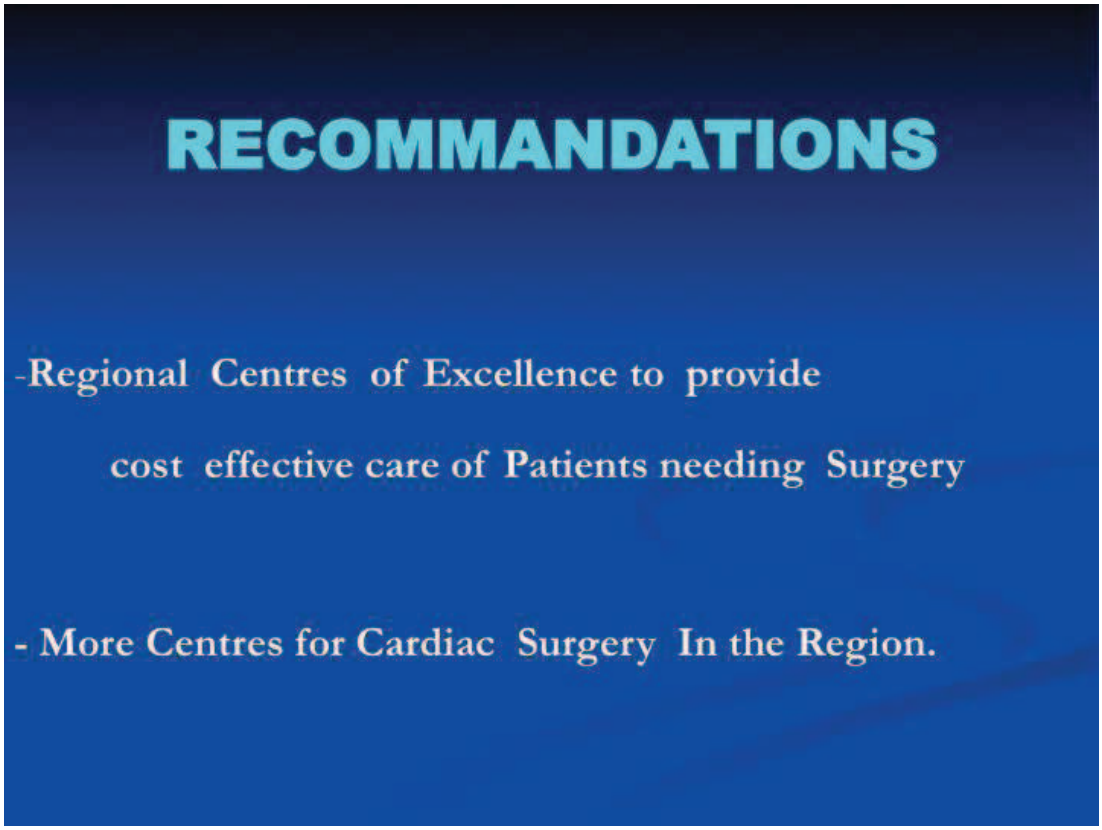

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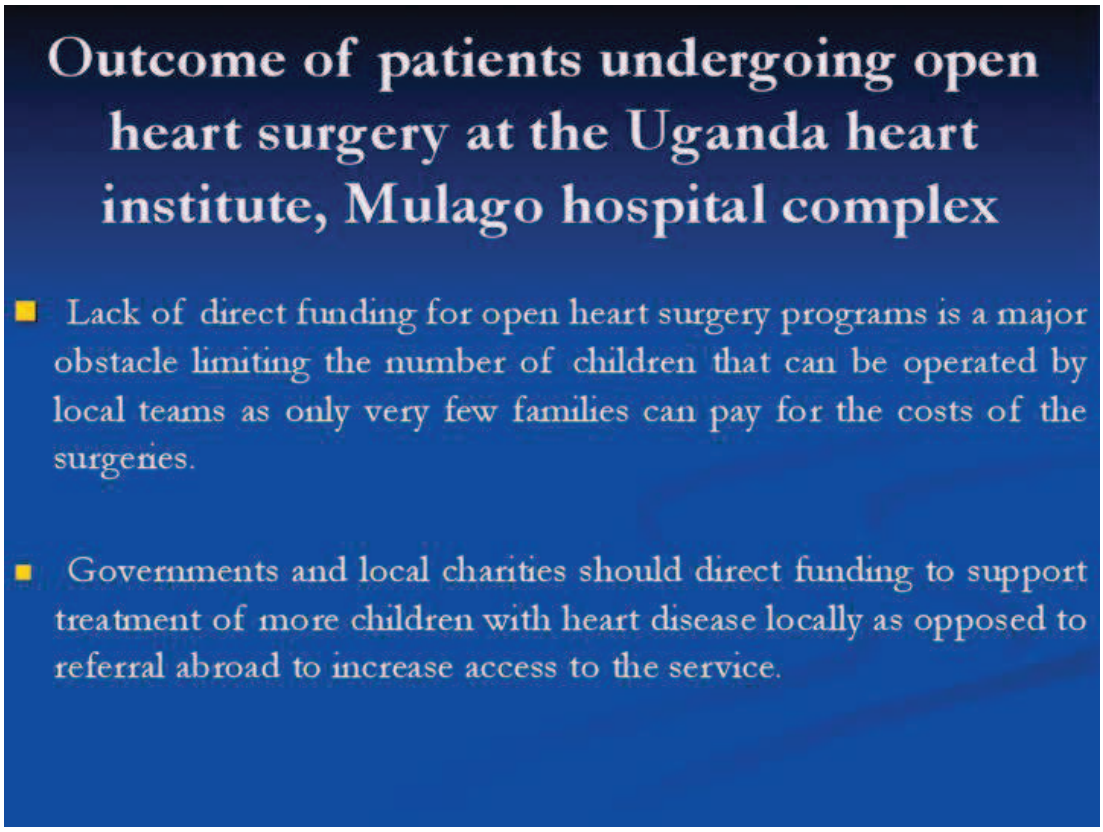

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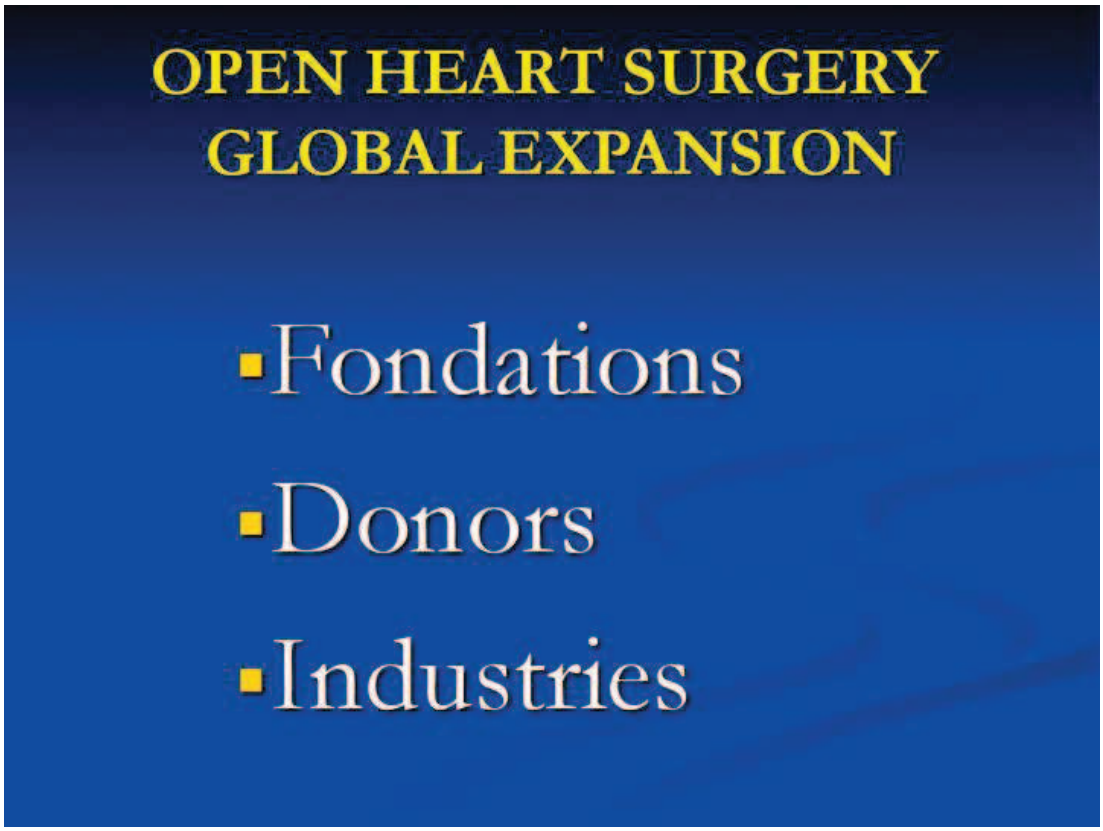

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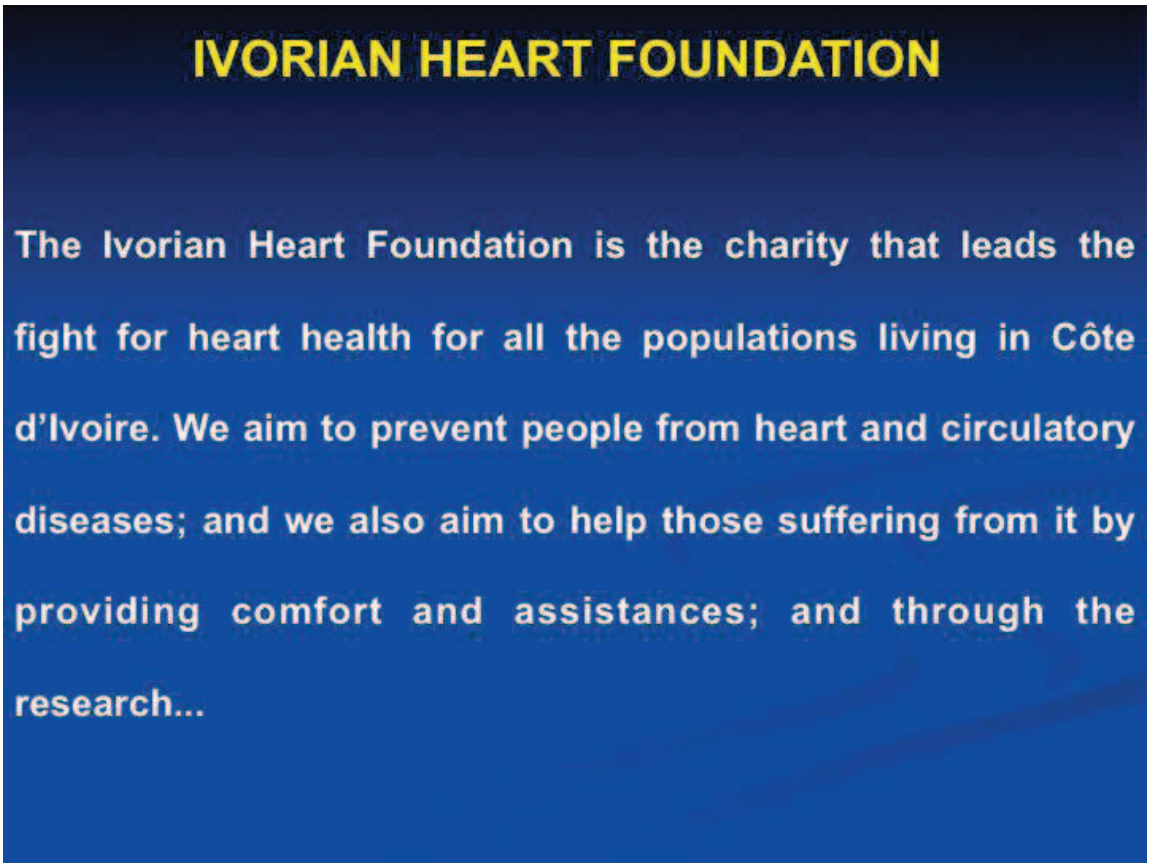

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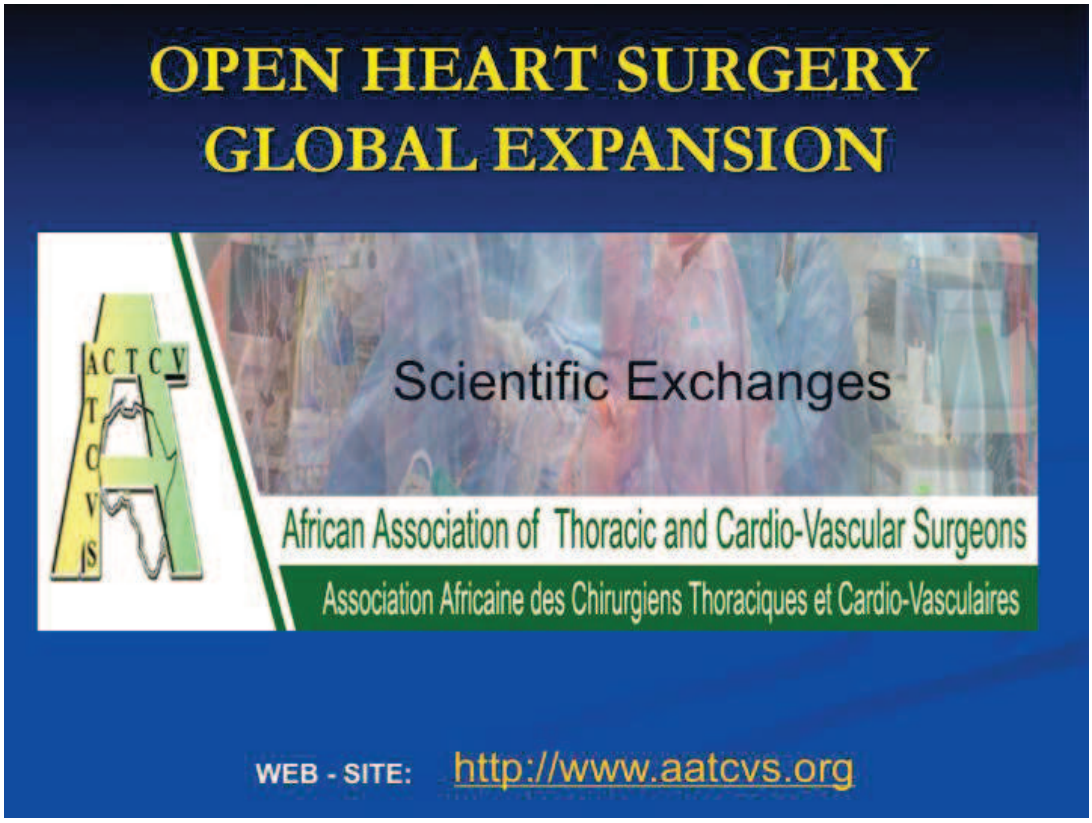

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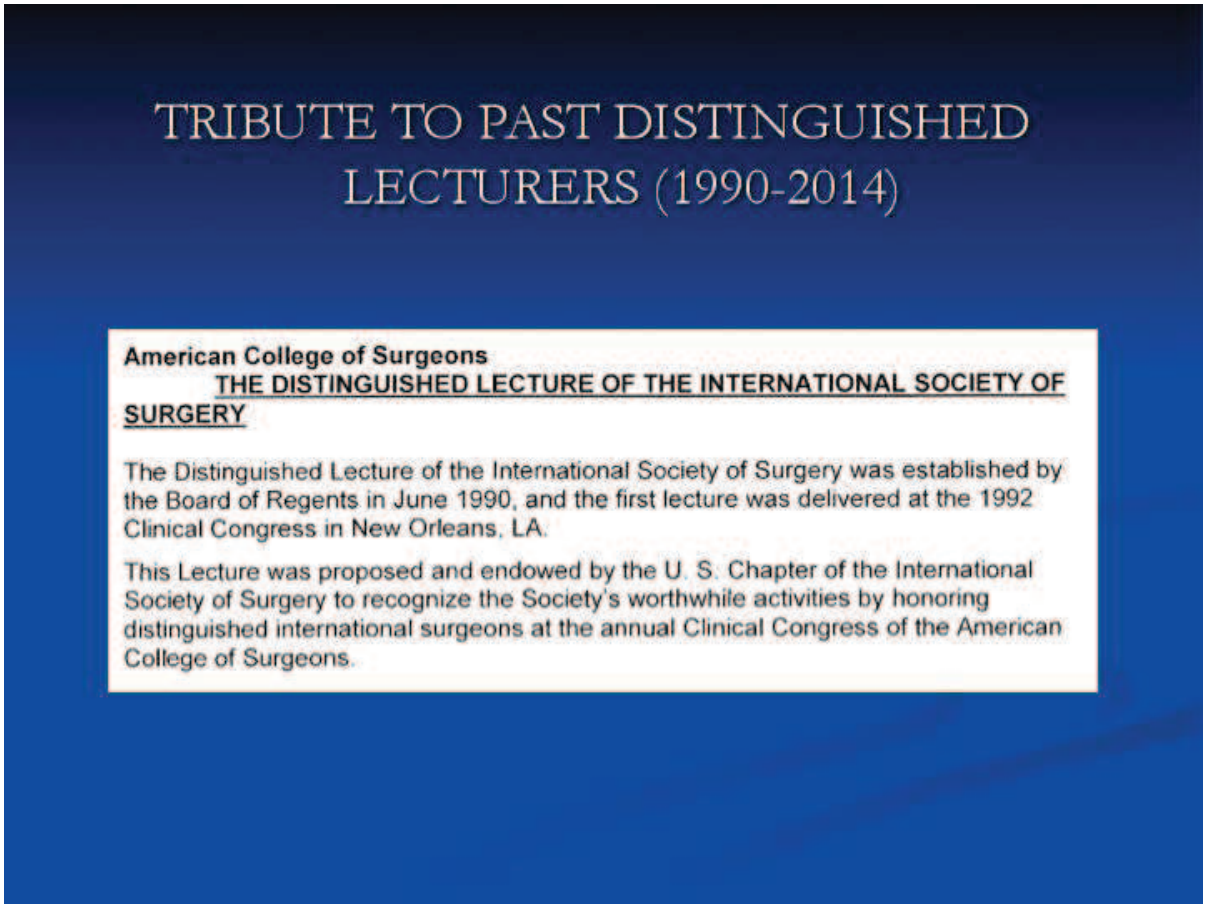

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DISTINGUISHED LECTURERS OF THE INTERNATIONAL SOCIETY OF SURGERY AT THE AMERICAN COLLEGE OF SURGEONS CLINICAL CONGRESS SINCE 1992

2015 : Koffi Herve Yangni-Angate, Lagos, Nigeria
Challenges in Open Heart Surgery in Africa: Côte – d'Ivoire Experience
2014: Meena Nathan Cherian, MD Surgical Care in Global Health Agenda
2013: Professor Norman S. Williams ,
Attempts to Innovate in Coloproctology and Beyond
2012: Ari Leppaniemi, MD, PhD, Helsinki, Finland
Humanitarian Missions: Can One Surgeon Make a Difference?
2011: Eilis McGovern, Dublin, Ireland
Surgical Training and Surgical Practice: Are We Getting the Formula Right?
2010: Alberto Raul Ferreres, Buenos Aires, Argentina
Ethics and Errors in Surgery
2009: Lord Ara W. Darzi, London, England
Healthcare Reform in the United Kingdom
2008: Kenneth D. Boffard, Houghton, Rep. of South Africa
Defining Competence: Remuneration, Results, Rewards, and Reinvestment
2007:Michael G. Sarr, Rochester, MN
What Can the Academic Community Offer the Third-World Surgeon?
2006: Henrik Kehlet, Copenhagen, Denmark
Fast Track Surgery – From Here to Where?
2005: Jonathan L. Meakins, Oxford, England
Evidence-based Surgery: The Future?!
2004: John Wong, Hong Kong, Peoples Rep. of China
Esophageal Cancer Worldwide: Same Name, Different Disease, One Mission
2003: Jose F. Patino, Bogota, Colombia
Chaos Theory, Uncertainty, and Surgery
2002: Ainslie G. R. Sheil, Sydney, NSW, Australia
Xenotransplantation and Cloning: Facts and Future
2001: Jorge Cervantes, Mexico, DF, Mexico
Virchow's Legacy: Venous Thrombosis and Pulmonary Embolism
2000: Hans G. Beger, Ulm, Germany
Pancreatic Head Resection in the New Millennium – Changing Face of Surgical Morbidity
1999: Sir Alfred Cuschieri, Dundee, Scotland
Minimal Access Therapy in the Next Millennium
1998: Sir Peter J. Morris, Oxford, England
Kidney Transplantation: A Remarkable Story in Modern Medicine
1997: Sir David Carter , Edinburgh, Scotland
Cancer of the Digestive System – Has Surgery Nothing Further to Offer?
1996: Umberto Veronesi, Milan, Italy
The Present and Future of Breast Cancer Management
1995: Hans Borst, Hannover, Germany
Aortic Dissection – A Multi-disciplinary Challenge
1994: Michael Trede, Mannheim, Germany
Progress in the Surgical Treatment of Pancreatic Carcinoma
1993: John Terblanche, Cape Town, South Africa
The Changing Face of Biliary Tract Surgery in 1993
1992: Sir Roy Yorke Calne, Cambridge, England
Future Prospects in Organ Transplantation

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Gregorio Calvi di Bergolo (1904-1994)
Life, Labor, Study, Charity, Death
Oil on canvas, 104 x 84 in., 1953

International Museum of Surgical Science Collections, xx1995.436

One of a series of murals illustrating historical achievements in surgery and medicine, this allegorical painting symbolizes the five phases of life, with their titles inscribed in Latin below.

Publication sponsored by Sir Joseph Charles Serrato, KHS, MD, FICS.
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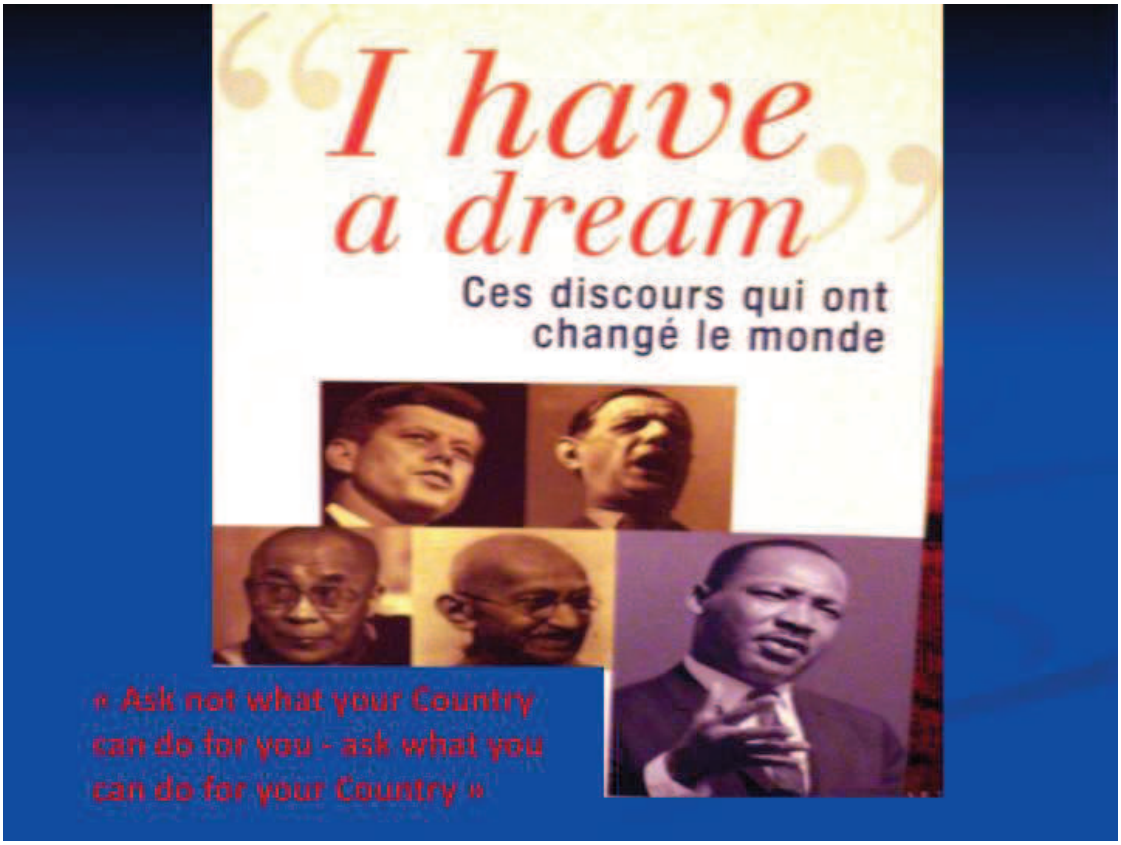

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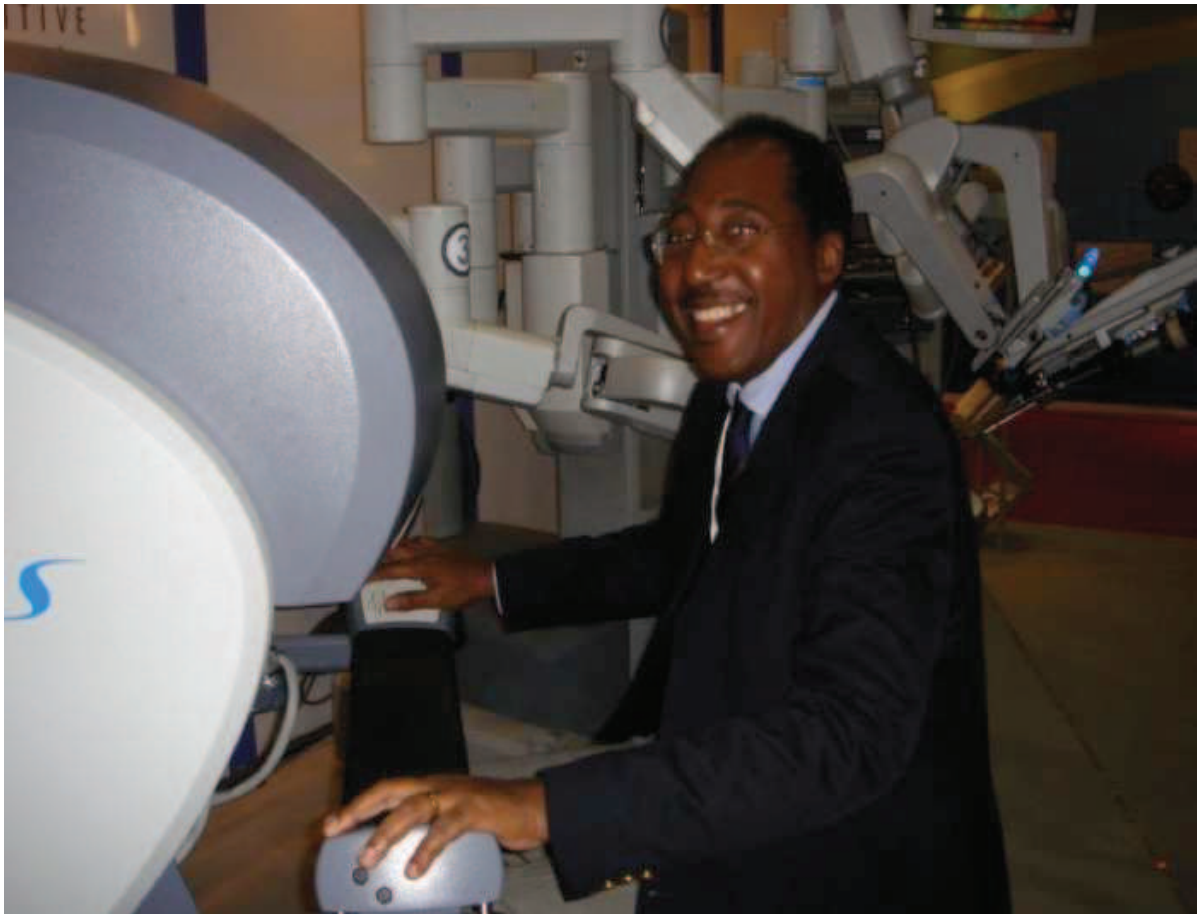

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