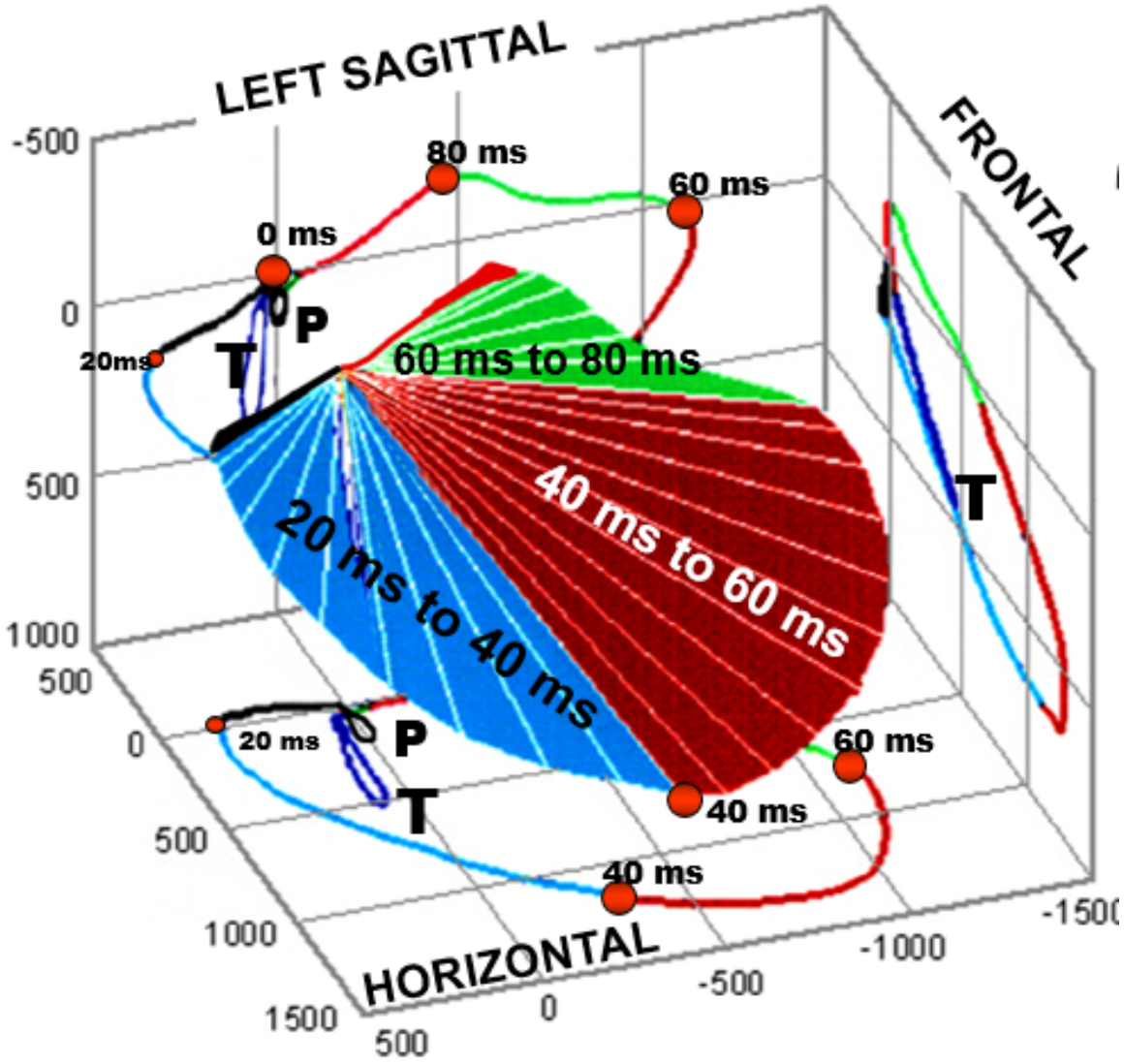
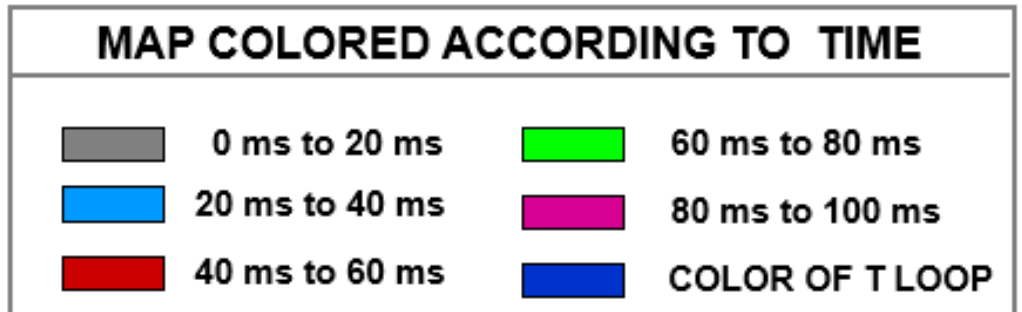
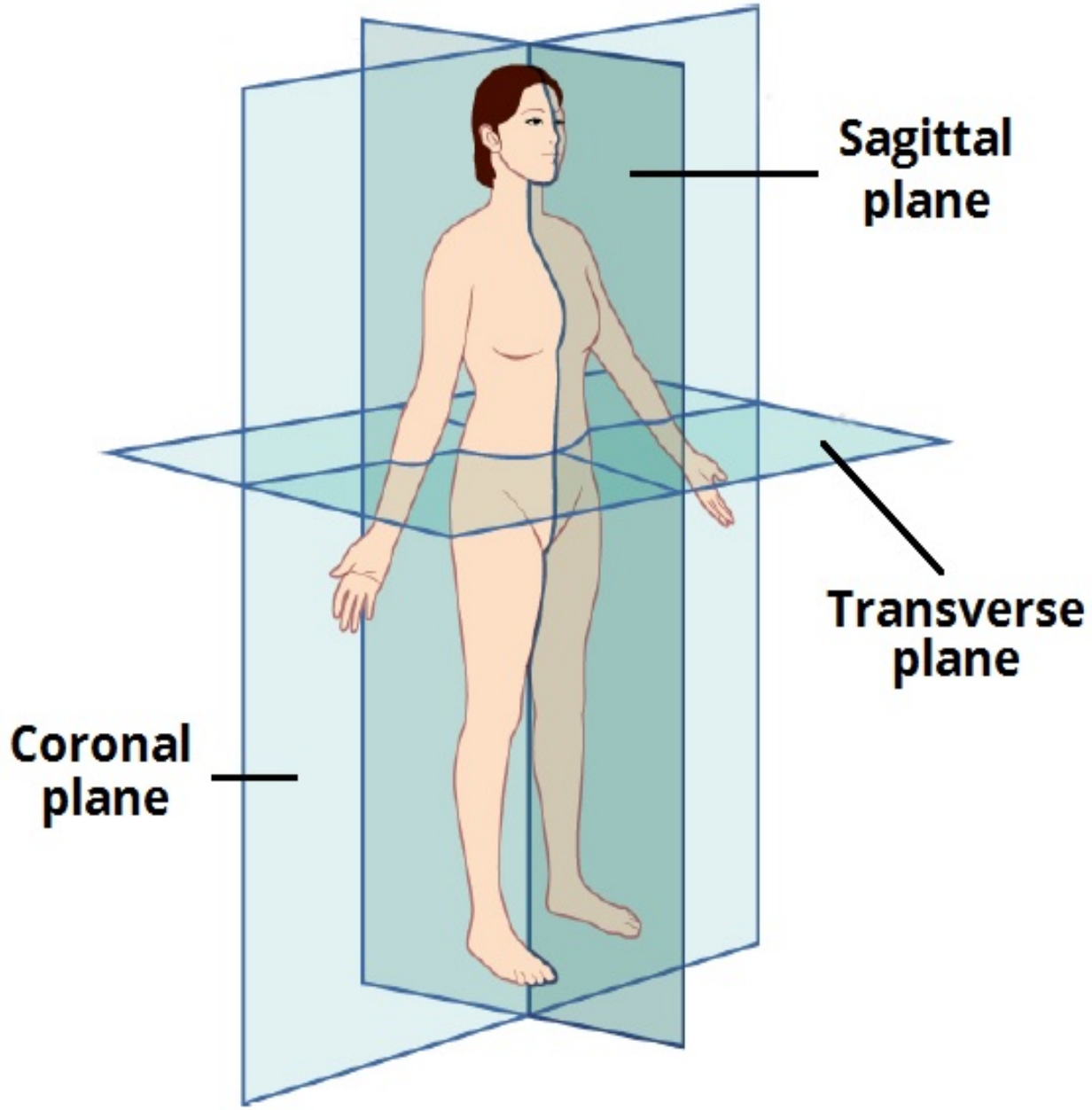
Dromotropic disturbance in young Caucasian woman : The value of “a forgotten” method for appropriate diagnosis: The Vectorcardiogram

Distúrbio dromotrópico em jovem caucasiana: O valor de um método “esquecido” para um diagnóstico adequado: o Vetorcardiograma

Trastorno dromotrópico en una joven blanca: el valor de un método “olvidado” para el diagnóstico definitivo: el Vectorcardiograma







the anatomical planes of the human body.

Case report

NJ, 33 years old, female, white, divorced, architect, no children, born in São Paulo city, Brazil

Main Complaint: Fleeting random palpitations (from 3 to 5 minutes) for more than 5 years, which occur on average twice a month and rarely “pre-syncope” fainting. Denies chest pain or discomfort, palpitations, dyspnea, orthopnea, or paroxysmal nocturnal dyspnea (PND),

Personal history: Nothing noteworthy

Family history: father with type 2 diabetes, dyslipidemia, hypertension and early coronary disease (45 years old) with recent implantation of 2 drug-eluting stents.

She has no addictions, takes daily walks and eats correctly.

Conflicting family history due to parental divorce and mother's abandonment. She mentions being anxious, suffering from insomnia and that on several occasions she had consulted a psychologist who had diagnosed her with an anxiety disorder and had been medicated with a placebo (herbal medicine).

Physical examination None of note. asthenic slimline: Charpy angle <90°. Weight 58kg; Height: 1.64m, BP: 123/75 mmHg, HR: 89bpm, RF: 18 rpm, SO_2 98%.

An ECG was performed that revealed dromotropic disturbance of doubtful interpretation, which motivated the request for a complementary Vectorcardiogram.

Transthoracic echocardiogram (TTE) showed all normal LV chamber parameters, Interventricular septal wall thickness, mm, posterior wall thickness, mm, diastolic LV internal dimension, mm, systolic LV internal dimension, mm, and normal LV mass, g/m^2 . Additionally absence of asynchronous movement of the interventricular septum.

Laboratory tests including thyroid function, Hashimoto antibodies, complete lipid profile, kidney and liver function were also requested. The results were all normal.

Relato de caso

Paciente NJ, 33 anos, feminino, branca, divorciada, arquiteta, sem filhos, natural de São Paulo Capital Brasil

Queixa Principal: palpitações aleatórias fugazes (de 3 a 5 minutos) desde há mais de 5 anos, que ocorrem em media duas vezes por mês e raramente desfalecimento “pre-síncope” .

Nega dor ou desconforto torácico, palpitações, dispneia, ortopneia, dispneia paroxística noturna (DPN),

Antecedentes pessoais: Nada digno de nota

Antecedentes familiares: Pai diabético tipo 2, dislipidêmico, hipertenso e coronariano precoce (45anos). Recente implante de 2 stents farmacológicos.

Sem vícios, pratica regularmente caminhadas diárias e se alimenta em forma correta, sem vicios.

Historia conflitiva familiar por divorcio dos pais e abandono da mãe. Refere ser ansiosa, sofrer de insônia e que em várias oportunidades consultara uma psicóloga que diagnosticara transtorno de ansiedade tendo sido medicada com placebo(fitoterápico).

Exame físico Nada Digno de Nota. Longilinea: ângulo de Charpy <90°. Peso 58kg; Altura: 1.64m, PA: 123/75 mmHg, FC: 89bpm, FR: 18 rpm, Saturação de O_2 98%.

Realizou-se ECG que revelou distúrbio dromotrópico de interpretação duvidosa, o que motivou a solicitação de Vetorcardiograma complementar.

O ecocardiograma transtorácico (ETT) mostrou todos os parâmetros de AE e do VE normais: espessura da parede do septo interventricular em mm, espessura da parede posterior em mm, dimensão interna diastólica do Veem mm, dimensão interna sistólica do VE em mm e massa normal do VE,em g/m^2. Além disso, houve ausência de movimento assíncrono do septo interventricular.

Exames laboratoriais incluindo função tireoidiana, anticorpos antitirodeios, perfil lipídico completo, função renal e hepática normais.

Reporte de un caso

Paciente NJ, 33 años, blanca, divorciada, arquitecta, sin hijos, nacida en São Paulo Capital BrasilQueja principal: palpitaciones aleatorias fugaces (de 3 a 5 minutos) durante más de 5 un año, que ocurren en promedio dos veces al mes y rara vez desmayos "pre-síncope“?. Niega dolor o malestar torácico, palpitaciones, disnea, ortopnea o disnea paroxística nocturna (DPN),

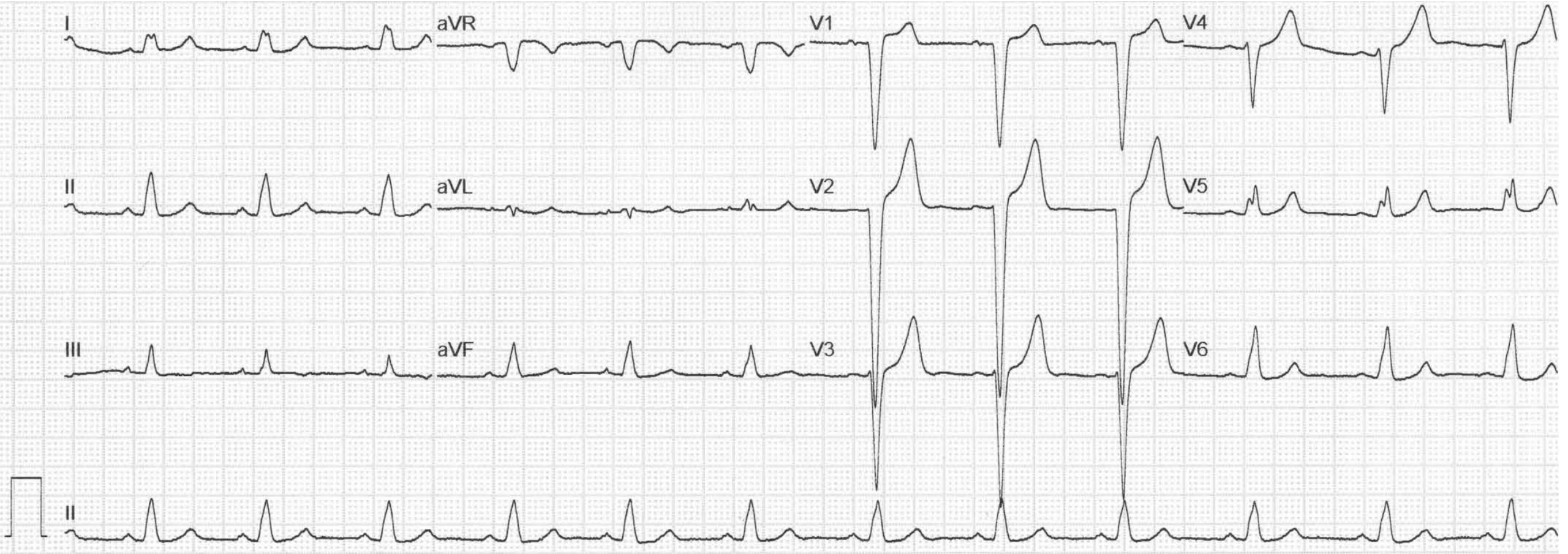
Historia personal: Nada digno de mención.; **Antecedentes familiares:** Padre diabético tipo 2, dislipidémico, hipertenso y com enfermedad coronaria precoz (45 años). Implantación reciente de 2 stents liberadores de fármacos.

No tiene adicciones, realiza caminatas diarias con regularidad y se alimenta correctamente.

Antecedentes familiares conflictivos por divorcio de los padres y abandono materno. Menciona estar ansiosa, sufrir de insomnio y que en varias ocasiones consulto a un psicólogo que le diagnosticó transtorno de ansiedad y medicada con un placebo (medicina a base de hierbas).Examen físico NDN. longilinea asténica: ángulo de Charpy <90°. Peso 58 kg; Altura: 1,64 m, PA: 123/75 mmHg, FC: 89 lpm, FR: 18 rpm, SO_2 s 98 %. Se realizó un ECG que reveló un trastorno dromotrópico de dudosa interpretación, por lo que se solicitó un vectorcardiograma complementario.El ecocardiograma transtorácico (ETT) mostró todos los parámetros del AI y VI normales: grosor de la pared del tabique interventricular en mm, grosor de la pared posterior en mm, dimensión interna diastólica del VI en mm, dimensión interna sistólica del VI en mm y masa normal del VI en g/m2. Además, no hubo movimiento asincrónico del tabique interventricular.Pruebas de laboratorio que incluyen función tiroidea, anticuerpos antitiroideos, perfil lipídico completo, función renal y hepática normal.

ECG performed on February 1, 2023 at 10:32 AM, **Name:** NJ; **Sex:** F; **Race:** Caucasian; **Weight:** 58kg; **Height:** 1.64m

Complain: Regular cardiac accelerations of random presentation and of short duration



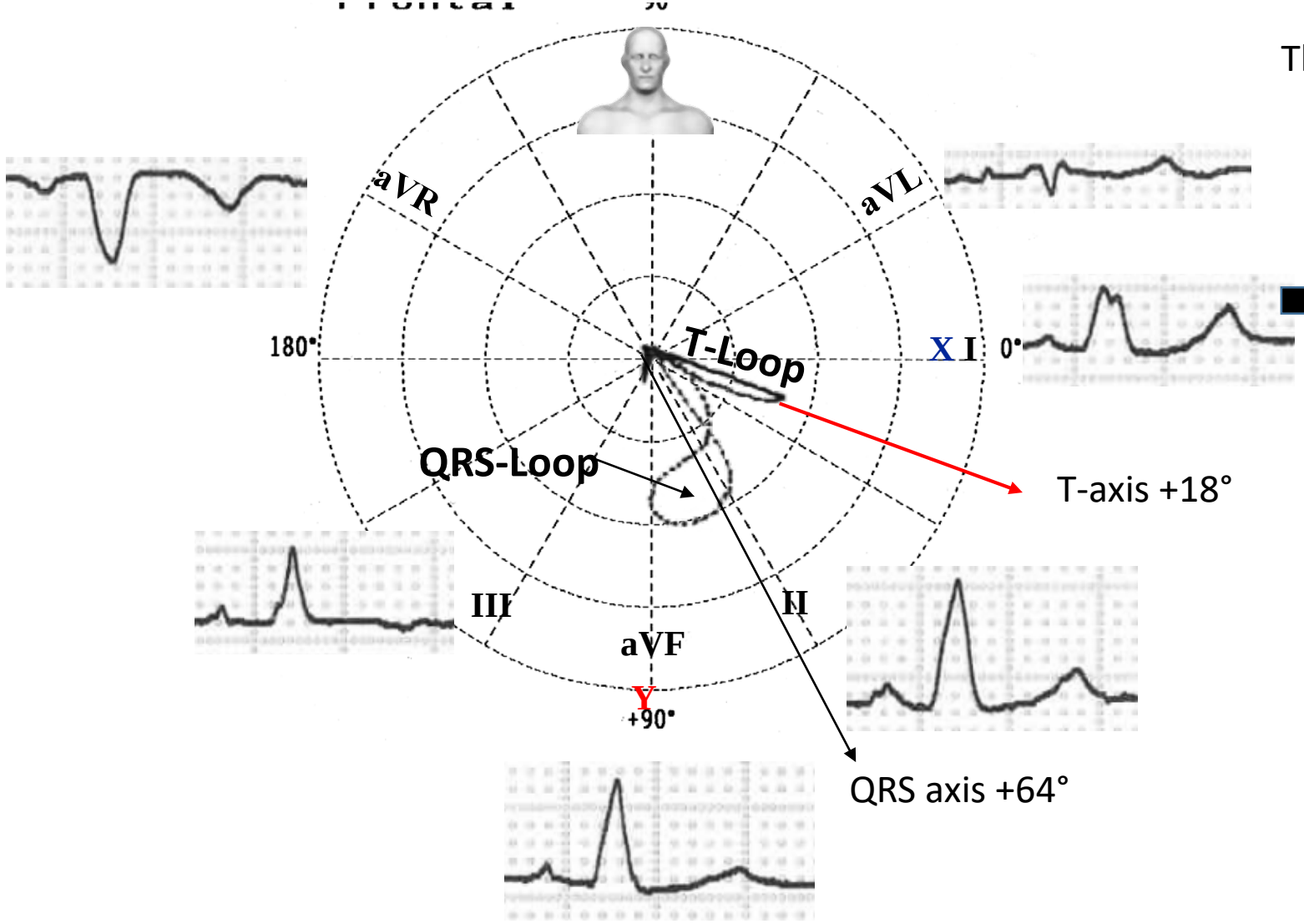
Sinus rhythm, normal P wave duration(80ms) normal P axis (+57°) normal PQ/PR interval (140ms), discrete QRS prolongation (114ms), R wave in lateral leads I, V_5-$_6$, v QS/rS from V_1 to V_3 followd by positive ST/T, normal QRS axis (+64°), normal T-axis (+18°), Ventricular repolarization (ST-T) in I lateral lead concordant with ventricular depolarization (QRS): absentem of "an *appropriate discordance".* Concordant means that the QRS and the ST/T go in the same direction.), Normal QT/QTc intervals (396/433 ms) Conclusion : Incomplete LBBB?

VCG performed on February 1, 2023 at 10:53 AM

Name: NJ; **Sex:** F**; Race: Caucasian; Weight:** 58kg; **Height:** 1.64 m

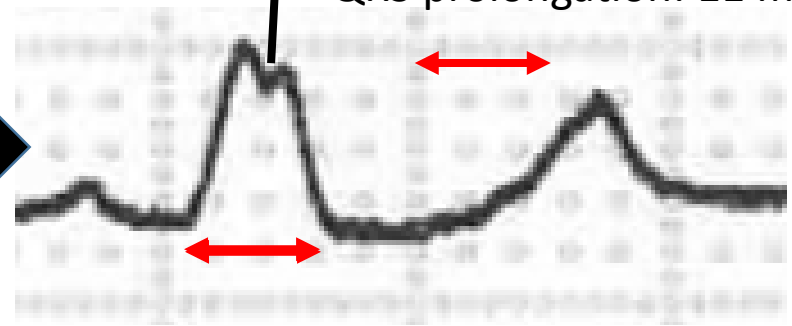
Complain: Regular cardiac accelerations of random presentation and of short duration

Frontal or Coronal plane



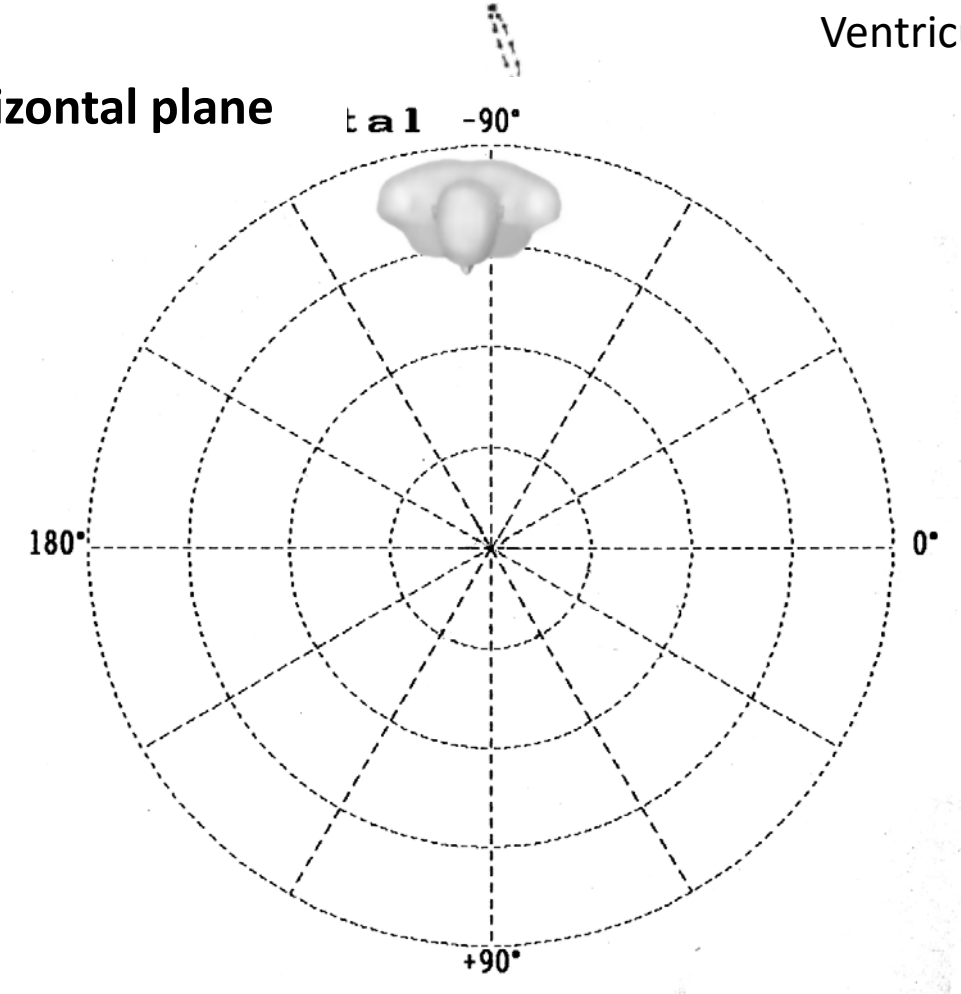
There is notching at the Apex of the QRS complex in I lead such as cLBBB

QRS prolongation: 114ms



Ventricular repolarization (ST-T) in I lateral lead concordant with ventricular depolarization (QRS): absentem of "a*appropriate discordance"*. Concordant means that the QRS and the ST/T go in the same direction.

Transverse or Horizontal plane

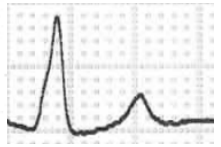


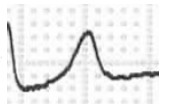
Ventricular repolarization (ST-T) in I lateral lead V_{5-6}

dant with ventricular depolarization (QRS):

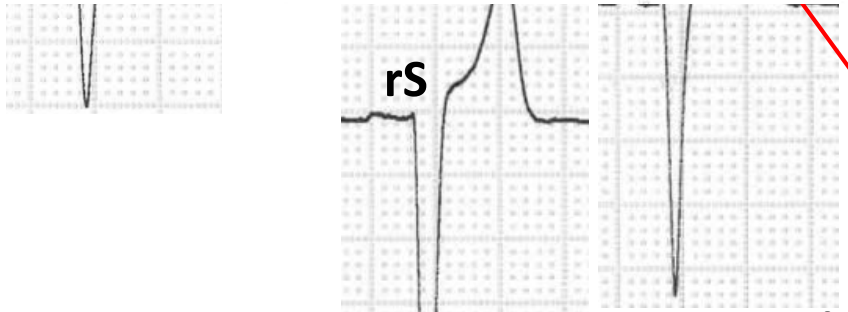
e "a*ppropriate discordance"*. Concordant means

e QRS and the ST/T go in the same direction.





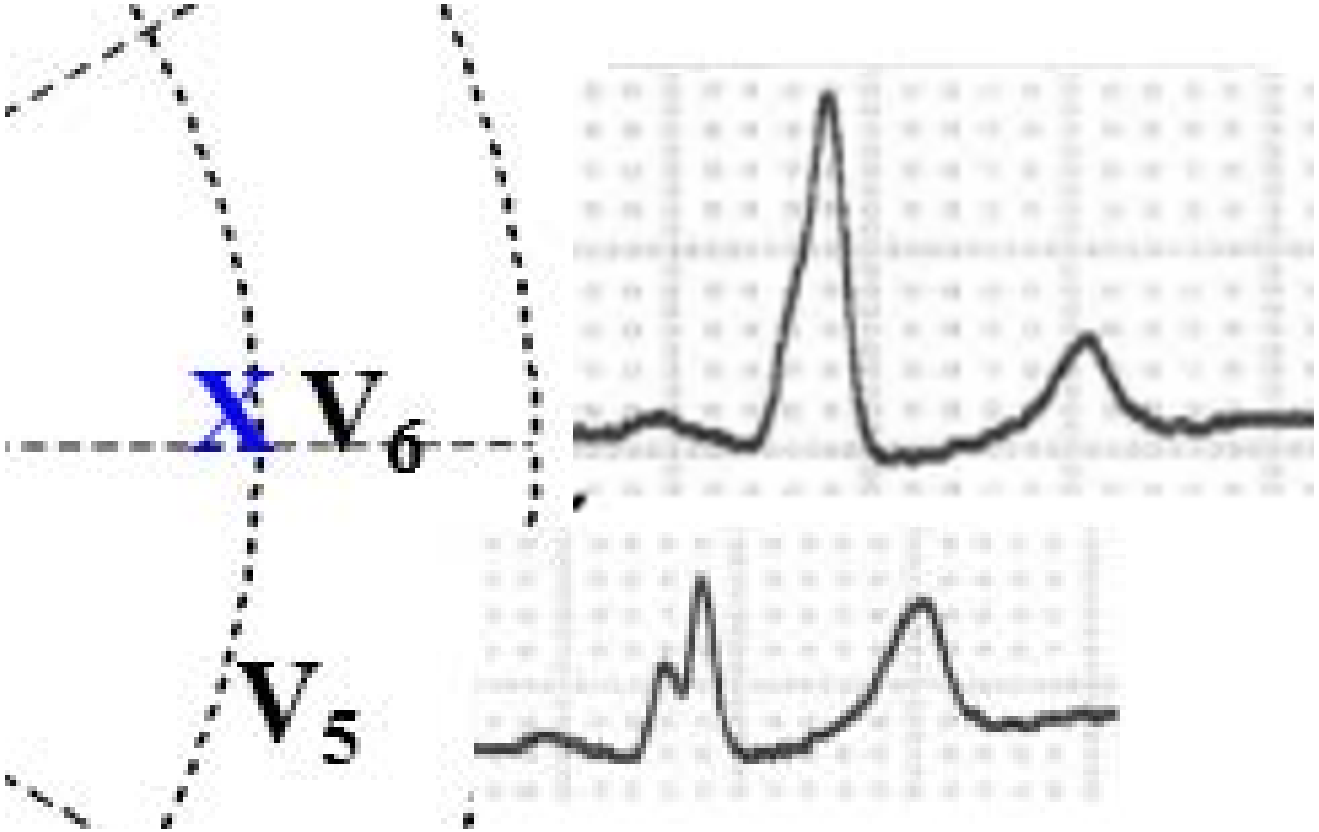
There is notching at the apex of the QRS complex in V5 lead



1. **Aapo L Aro 1, Antti Eranti 2, Olli Anttonen 2, Tuomas Kerola 2, Harri A Rissanen 3, Paul Knekt 3, Kimmo Porthan 4, Jani T Tikkanen 5, M Juhani Junttila 5, Heikki V Huikuri 5Delayed QRS transition in the precordial leads of an electrocardiogram as a predictor of sudden cardiac death in the general population. Heart Rhythm. 2014 Dec;11(12):2254-60. doi: 10.1016/j.hrthm.2014.08.014**

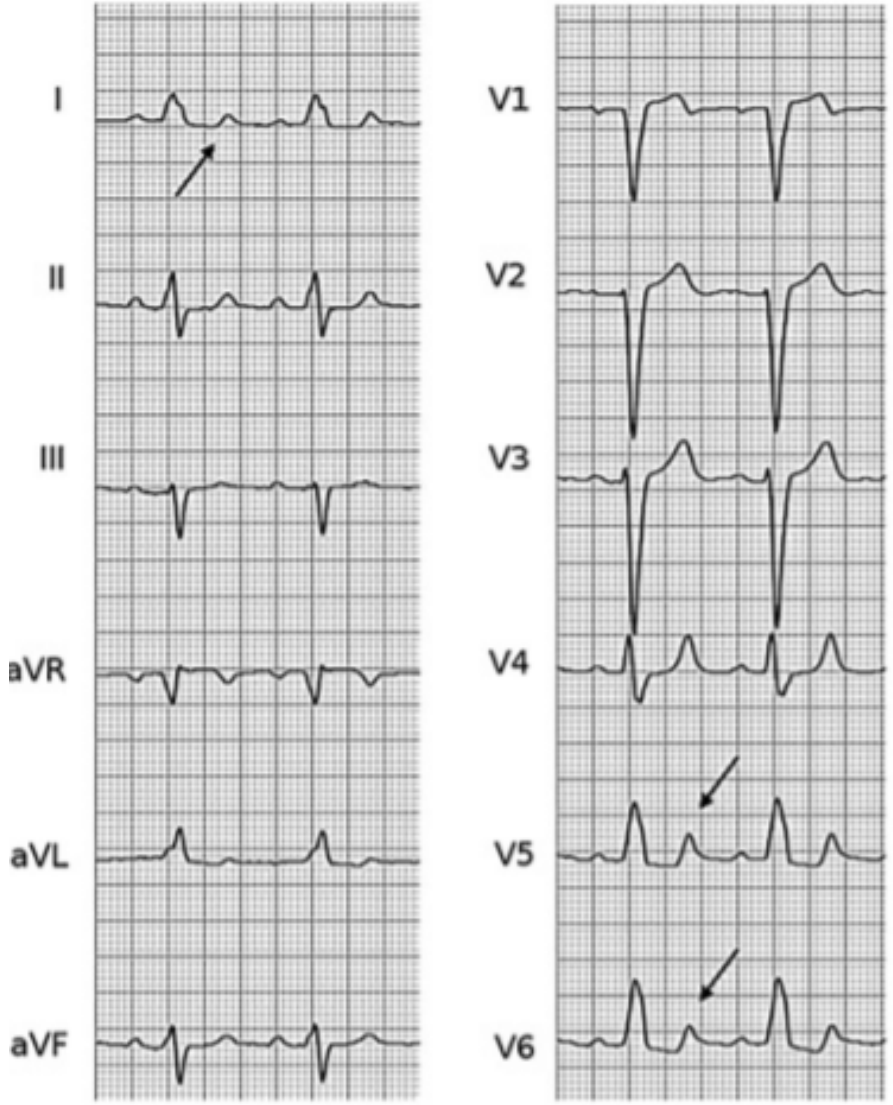
T-axis to front and leftward° +48°

The precordial lead where QRS pattern had changed from an rS to an Rs/ R configuration IS called transition zone, Normal transition zone is located between V3-V4. Delayed QRS transition in the precordial leads of an electrocardiogram as a predictor of sudden cardiac death in the general population. (1)



Positive T waves in leads with upright QRS may be normal (positive concordance) It is observed in ≈ 30% of cases of cLBBB

Concordant LBBB (cLBBB)



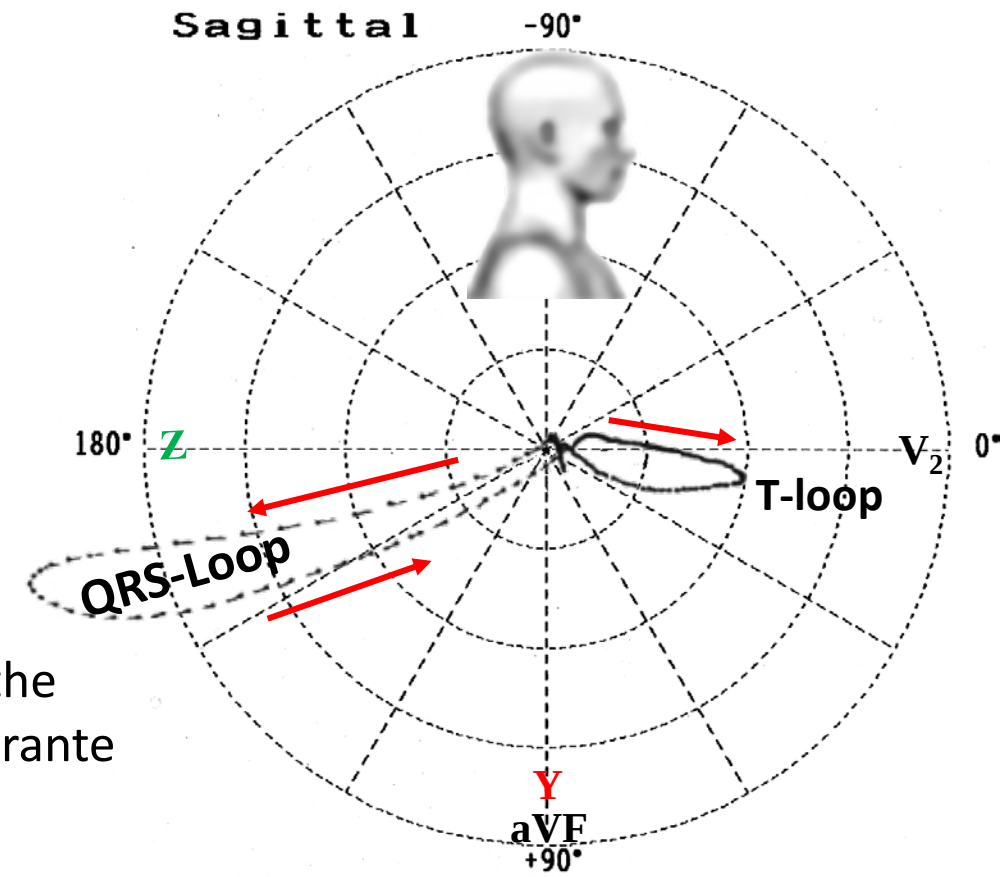
ECG showing concordant LBBB, characterized by a positive T wave in leads I and V_5 or V_6 (arrows). cLBBB definition: T-wave orientation concordant with QRS complex is characterized by a positive/diphasic T wave in leads I and V_5 or V_6 (at least in two of these three leads) **(Padeletti L 2018**);. What is the clinical significance of dLBBB versus cLBBB? . **Table next two slides** shows the clinical implications of both repolarization patterns in LBBB. Discordant and concordant left bundle branch block (dLBBB/cLBBB) are characterized by negative or positive T waves, respectively, in lateral leads.

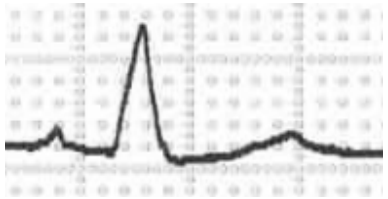
	Concordant LBBB (cLBBB) positive T wave in ead I or V5, V6	Discordant LBBB (dLBBB) negative T wave in lead I or V5, V6
% distribution	≈ 28-30%	≈ 68-70% c
Age	Significantly youger	Significantly older. The only independent variable at multivariate analysis
LV mass index (g/m^2)	Less	Greater
LVEF(%)	Better(mean 51%)	Lower mean 36% (**Khalil 2016**)
LV end-diastolic (mm)	Less	Greater
Renal function Creatinine (mg/dL)	Better	Worse
Neurohormonal activation	Less	Higher
Plasma level of BNP (ng/L)	Less	Greater
Norepinephrine NE (ng/L)	Less	Greater
Severity of the disease	Less	Greater
New York Heart Association class	Less	Higher
Degree of LV dysfunction and dilatat.	Less	Higher
QRSd	Less (mean 151ms)	Wider((mean 160 ms)(**Khalil 2016**)
Left atrium (LA) size	Less (mean 40 cm^2)	Larger LA size (mean 45 cm^2) (**Khalil 2016**)
Moderate and severe tricuspid regurgitation ,	Less	Higher

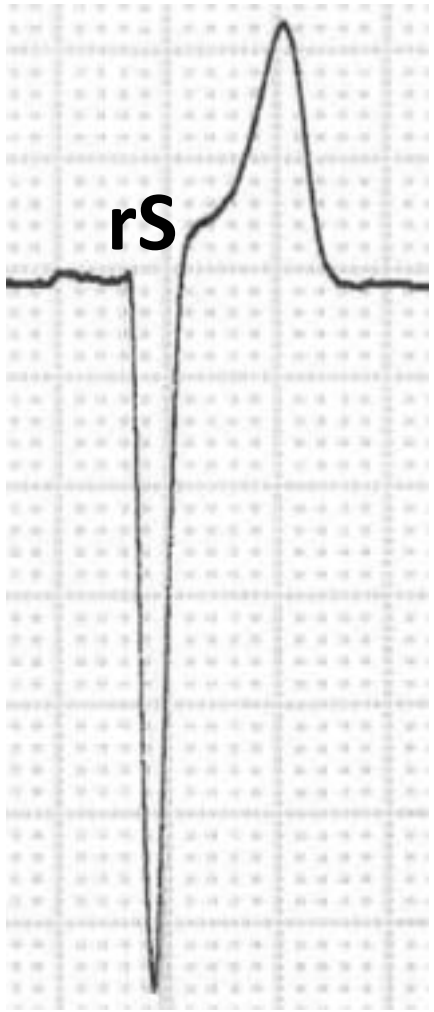
	Concordant LBBB (cLBBB) positive T wave in ead I or V5, V6	Discordant LBBB (dLBBB) negative T wave in lead I or V5, V6
Underwent Coronary Artery Bypass Grafting (CABG)	Less frequent	More frequently.
Moderate to severe mitral and tricuspid regurgitation	Less frequent	More frequent
Bi-ventricular dyssynchrony	Less prominet	More prominent
Prognosis	Better	Wrose (**Padeletti 2018**)
Benefit of cardiac resynchronization therapy	Lees	Greater (**Padeletti 2018**)
Occurrence of VT/VF	Less frequent	More frequent without statistic significance (**Padeletti 2018**)

Padeletti L, Aimo A, Vishenvsky B, Schwartz A, McNitt S, Wang PJ, Moss AJ, Emdin M, Zareba W. The prognostic benefit of cardiac resynchronization therapy is greater in concordant vs. discordant left bundle branch block in the Multicenter Automatic Defibrillator Implantation Trial-Cardiac Resynchronization Therapy (MADIT-CRT). Europace. 2018 May 1;20(5):794-800. doi: 10.1093/europace/euw446.

Right Sagital Plane







QRS- loop located in the inferior posteriorquadrante

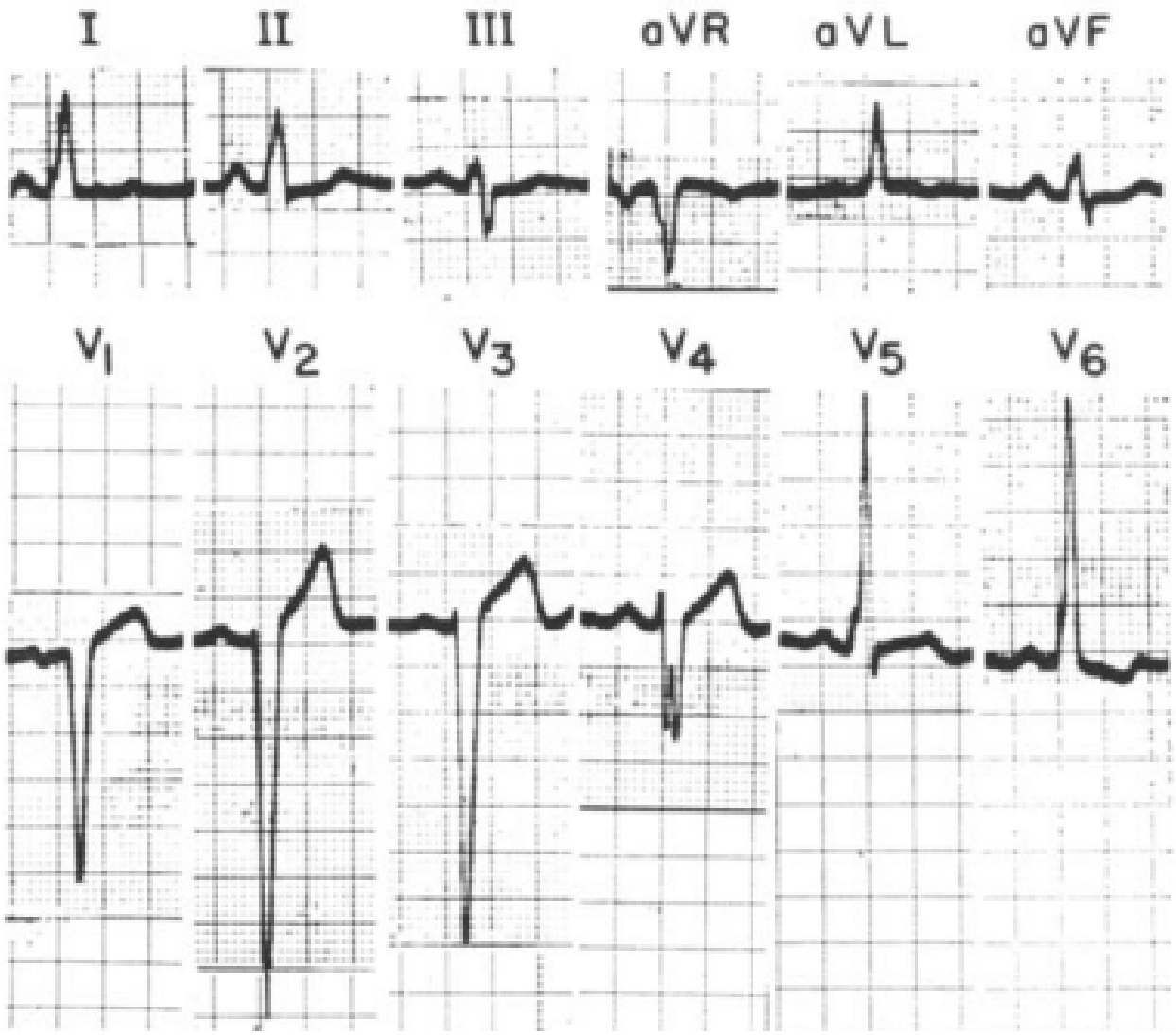
Incomplete Left Bundle Branch Block criteria

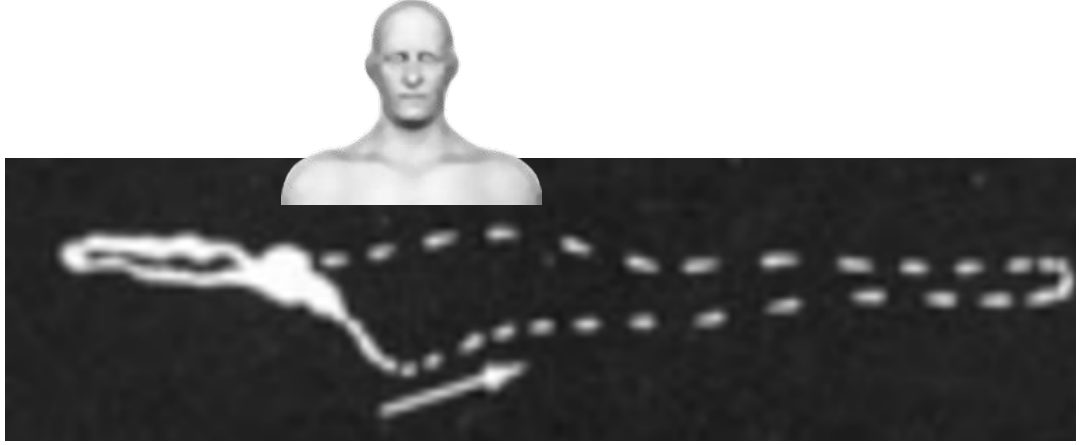
Incomplete Left Bundle Branch Block(iLBBB) was described for the first time experimentally in in dogs in 1917 by Rothberger and Winterberg (**Rothberger, C. J. , & Winterberg, H. (1917). Experimentelle Beiträge zur Kenntnis der Reizleitungs-störungen in den Kammern des Säugetierherzens.** ***Zeitschrift Für Die Gesamte Experimentelle Medizin*****, 5, 264**. **„Experimental contributions to the knowledge of conduction disturbances in the ventricles of the mammalian heart. Journal for all experimental medicine, 1917**").

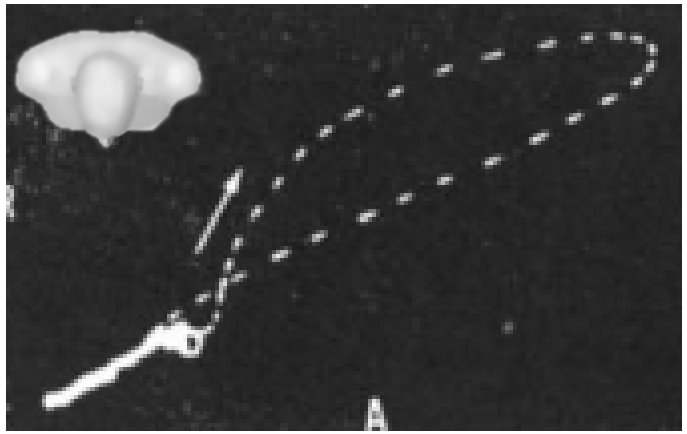
Barker criteria for iLBBB (1952) (Barker, Joseph M. The Unipolar Electrocardiogram, a Clinical interpretation. Appleton-Century-Crofts, Inc ., 1952. ASIN : B00DV8HEPC)

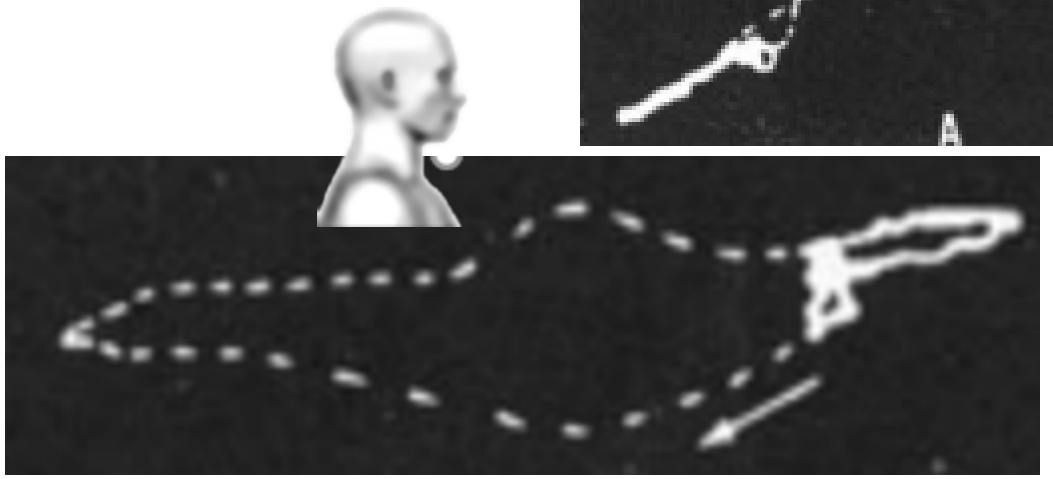
1) The QRSD < 0.12 second and at least 0.10 second in duration: **Present in this case**
2) There are not q waves in leads V_5-V_6: Reversal septal activation **Present in this case**
3) There is sluring or notching of the QRS complexes such as is seen in cLBBB: **Present in this case in I and V_5**

4) The QRS complexes usually shows high voltage when associated with LVH 20% of cases : ***absent in this case***

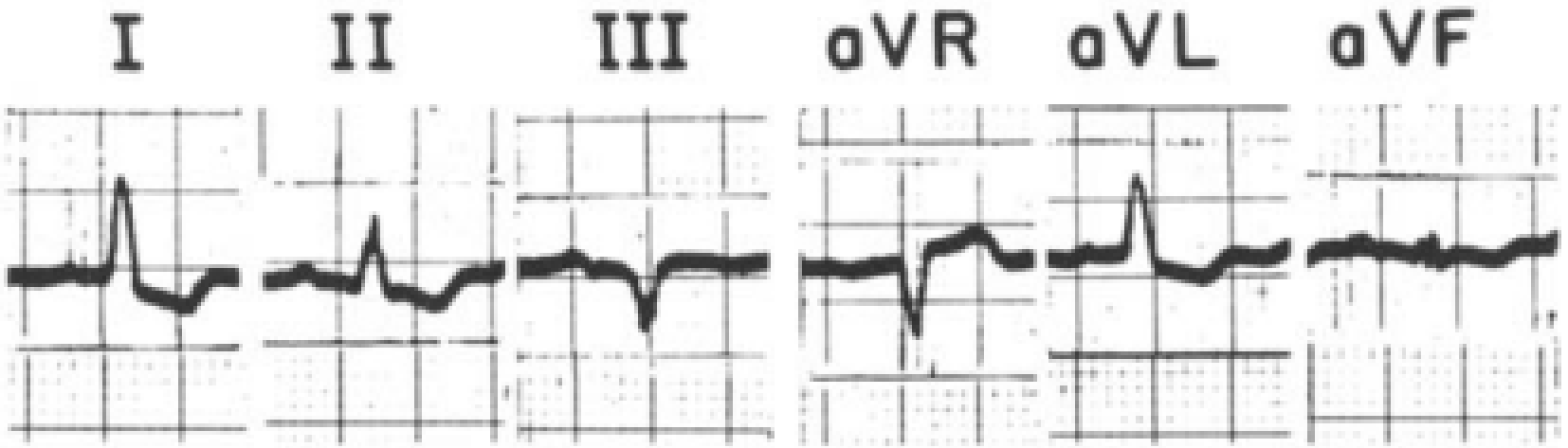


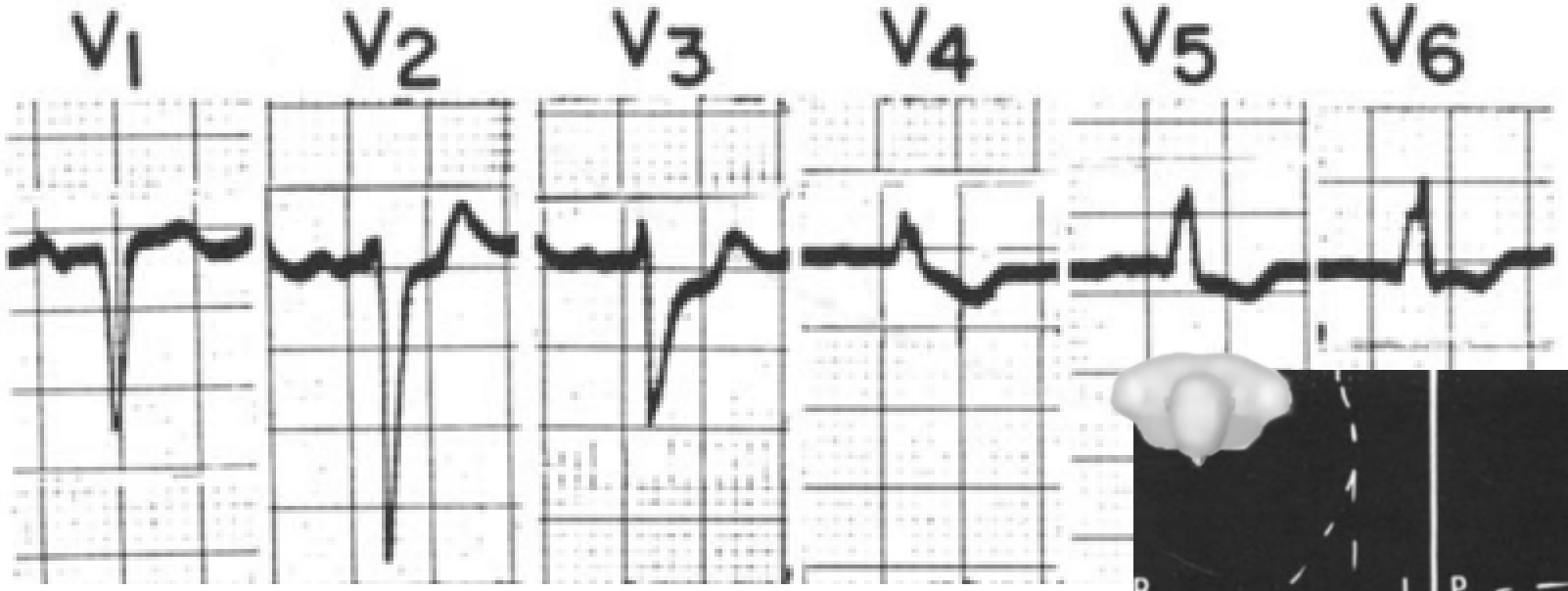


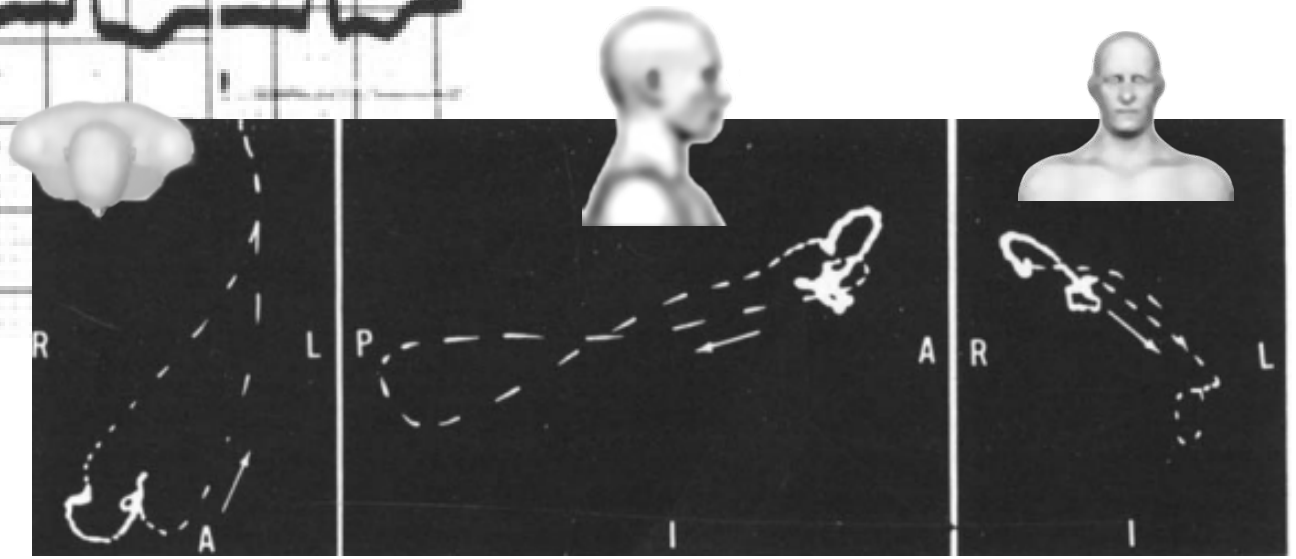




ECG and VCG Note the leftward and anterior initial deflection and subsequent clockwise inscription of the horizontal QRS loop. The conduction delay is best displayed in the early portion of the efferent limb of the frontal QRS loop .


I
II
III
aVR
aVL
aVF


V1
V2
V3
V4
V5
V6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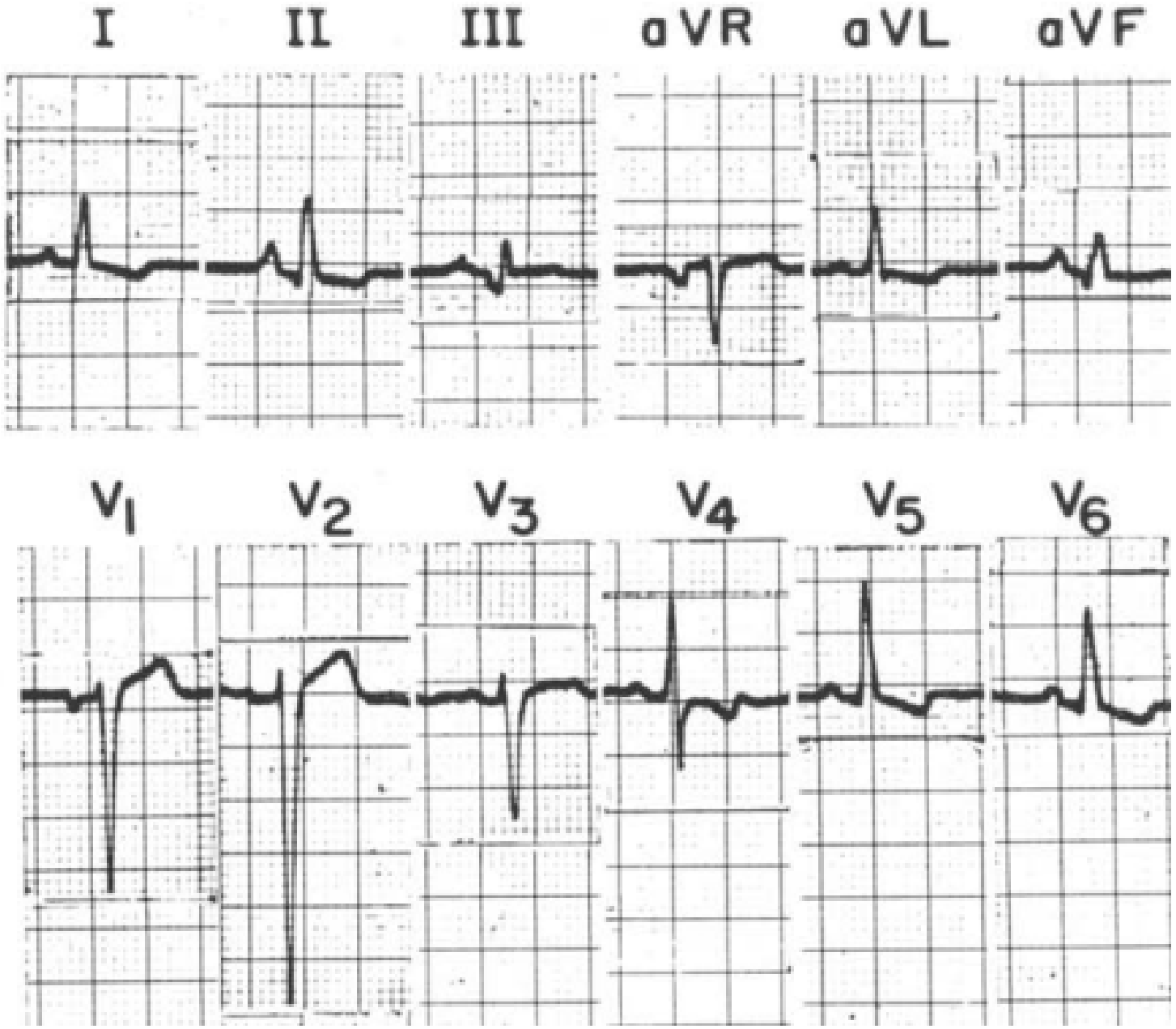
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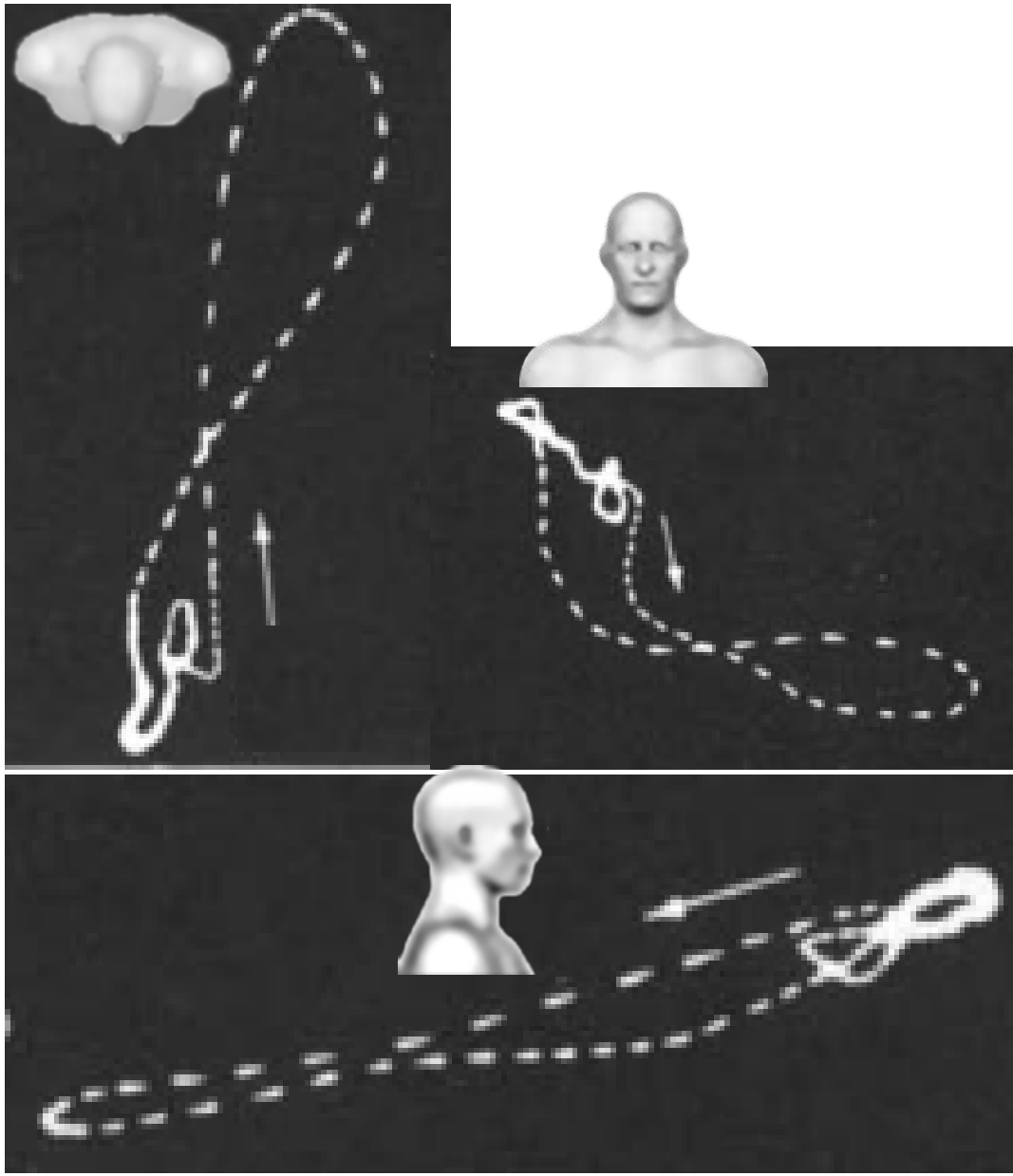
V6



Mexican School criteria classification for LBBB (M I RODRIGUEZ, D SODI-PALLARES. The mechanism of complete and incomplete bundle branch block. Am Heart J. 1952 Nov;44(5):715-46. doi: 10.1016/0002-8703(52)90099-9)(Sodi, D. Bisteni A, Testelli MR AND Medrano GA Ventricular activation and the vectorcardiogram in bundle banch blocks)(Sodi, D. , Bisteni, A. , & Medrano, G. (1964). *Electrocardiografia y vectorcardiografia deductivas* (Vol. 1). Mexico, DF: La Prensa Médica Mexicana.) (Demeteio Sodi-Pallares, M.D., Abdo BIstent, M.D., Mario R. Testelli, M.D., AND Gustavo A. Medrano, M.D. Ventricular Activation and the Vectorcardiogram in Bundle-Branch Blocks Clinical and Experimental Studies with a Critical Appraisal of the Vectorcardiographic Methods of Frank and Grishman B With the technical assistance of Alfredo de Micheli, M.D. 1961 Circ Research 9:1098,) (Andrés R. Pérez-Riera, 1 Raimundo Barbosa-Barros, 2 Marianne P. C. de Rezende Barbosa, 1 Rodrigo Daminello-Raimundo, 1 Luiz C. de Abreu, 1 and Kjell Nikus 3 Left bundle branch block: Epidemiology, etiology, anatomic features, electrovectorcardiography, and classification proposal. . doi: 10.1111/anec.12572)

a. ***First-degree iLBBB;***
b. ***Second-degree iLBBB (first degree and second degree correspond to iLBBB);***
c. ***Third-degree LBBB or cLBBB. QRSD ≥ 12Oms***

a. ***First-degree iLBBB:*** *In the horizontal plane the QRS loop is inscribed in the normal counter clock –wise direction with some delay in early portion of the loop* **(Demeteio Sodi-Pallares, M.D., Abdo BIstent, M.D., Mario R. Testelli, M.D., AND Gustavo A. Medrano, M.D. Ventricular Activation and the Vectorcardiogram in Bundle-Branch Blocks Clinical and Experimental Studies with a Critical Appraisal of the Vectorcardiographic Methods of Frank and Grishman B With the technical assistance of Alfredo de Micheli, M.D. 1961 Circ Research 9:1098,)**

b. ***Second-degree iLBBB:*** *figure in eight rotation in the horizontal plane with QRS-loop duration <120ms (< 60 commets) (first degree and second degree correspond to iLBBB). In 15% to 20% of cases of Second-degree iLBBB LVH pattern is registered (****Sánchez C, Walsh TI, Massie E, The mechanism of complete and incomplete bundle branch block Am J Cardiol . 1961 May;7:629-37. doi: 10.1016/0002-9149(61)90446-5.****)* ***(****Varriale P, Alfenito JC, Kennedy RJ. The vectorcardiogram of left ventricular hypertrophy. Analysis and criteria (Frank Lead system). Circulation. 1966 Apr;33(4):569-76. doi: 10.1161/01.cir.33.4.569.****) Cooksey, Dunn and Massie postulate the following criteria for iLBBB***

1) The R waves in leads I and V6 sHowed slurred or noTched upstrokes

2) Absente Q wave in leads I and V6

3) Mimmic anterior MI

4) The precordial leads showed no definitive evidence of anterior infarction

c. ***Third-degree LBBB or cLBBB***

QRS duration ≥ 120ms in adults

Prolonged R-Wave Peak Time(RWPT) ≥60ms in I, aVL, V_4, V_5, and V_6 (any of two) (**GE Healthcare (2008). *Marquette™ 12SL™ ECG analysis program - physician's guide*. Retrieved** from https://www.gehealthcare.co.uk/en-GB/products/diagnostic-cardiology/marquette-12sl [Google Scholar)

Initially, the term *intrinsicoid deflection* meant the time from the onset of the earliest Q or R wave to the peak of the R wave in the unipolar lateral precordial leads V_5–V_6, and was considered as the instant at which the area of cardiac muscle immediately below a unipolar epicardial electrode was completely depolarized. This term was coined by MacLeod, Wilson, and Barker in 1930. (**Macleod, A.G. , Wilson, F.N. , Barker, P.S. The form of the electrocardiogram; intrinsicoid electrocardiographic deflections in animals and man. *Proc Soc Exper Biol Med* 27; 1930:586**.)to differentiate it from the term intrinsic deflection coined in 1914 by Sir Thomas Lewis experimentally in dog's hearts. (**Lewis T, Meakins J, White PD (1914). The excitatory process in the dog's heart. Part 1.The auricles. *Philos Trans Roy Soc Lond* B205: 375–426 258**)because the transition from a positive deflection registered from an electrode placed on the precordial body surface (semidirect unipolar lead) is less abrupt than from an electrode placed experimentally directly on the epicardium. The validity of this concept was supported experimentally by Dower.(**Dower GE. In defense of intrinsic deflection. *Br Heart J* 1962;24(1):55–60**.)He summarizes:

"The intrinsic deflection of Lewis has been variously defined and has been rejected by some as an indication of activity beneath an electrode on the surface of the heart. The use of intracellular electrodes, a surrounding wire loop electrode and fast recording speeds has, however, shown that the surface electrocardiogram does, in fact, present a negative deflection that is produced by immediately subjacent cells and which may, therefore, correctly be termed intrinsic. It is more marked on the left than on the right due to the electric field generated by the heart as a whole. The importance of this finding relates to the possibility of the existence of appreciable intrinsicoid deflections in precordial leads." (**Andrés Ricardo Pérez-Riera, M.D., Ph.D.,corresponding author 1 Luiz Carlos de Abreu, Ph.D., 2 Raimundo Barbosa-Barros, M.D., 3 , 4 Kjell C. Nikus, M.D., Ph.D., 5 and Adrian Baranchuk, M.D., F.A.C.C., F.R.C.P.C. 6 R-Peak Time: An Electrocardiographic Parameter with Multiple Clinical Applications Ann Noninvasive Electrocardiol. 2016 Jan; 21(1): 10–19. Published online 2015 Nov 2. doi: 10.1111/anec.12323 PMCID: PMC6931847 PMID: 26523751**)

Progression of iLBBB toward cLBBB occurs in $\approx {}^{1}/_{3}$ of cases within 2 years. Additionally, the presence of QRS notching/slurring in the lateral leads during iLBBB was the strongest predictor for progression toward cLBBB. These findings that QRS notching is associated with progression to cLBBB combined with the existing evidence that QRS notching in iLBBB is associated with reversed septal activation, raises the question whether QRS notching should be considered as a major

diagnostic criterion to define "true" iLBBB. Indeed, the difficult ECG distinction between iLBBB form LVH (**Ellie Senesael, MD,corresponding author 1 Simon Calle, MD, 1 Victor Kamoen, MD, 1 Roland Stroobandt, MD, PhD, 1 Marc De Buyzere, MSc, 1 Frank Timmermans, MD, PhD, 1 and Jan De Pooter, MD, PhD 1. Progression of incomplete toward complete left bundle branch block: A clinical and electrocardiographic analysis Ann Noninvasive Electrocardiol. 2020 Jul; 25(4): e12732. https://doi.org/10.1111/anec.12732**)

The ILBBB is an electrocardiographic entity, having well defined criteria, yet is a frequent cause of misinterpretation.

- The R>L septal depolarization results in loss of the normal left ventricular q wave, being replaced by an initial r-R wave: Absence of Q /q waves in lateral leads, is caused by reversal septal activation and consequent elimination of lateral Q /q waves
- QRS duration (QRSD) ≥110 and <120 ms in adults, between 90 and 100 ms in children aged 4 to 16 years and between 86 and 90 ms in children younger than 4 years.
- Negative QRS complex in leads V_1 and V_2: deep QS complex with no preceding R wave);
- Prolonged R-Wave Peak Time(RWPT) ≥60ms in I, aVL, V4, V5, and V6 (any of two) (**GE Healthcare (2008). *Marquette™ 12SL™ ECG analysis program - physician's guide*. Retrieved** from https://www.gehealthcare.co.uk/en-GB/products/diagnostic-cardiology/marquette-12sl [Google Scholar)

- Absence of normal septal q-wave in leads V4, V5, V6, I and aVL. (any of two) because Septal activation is thus reversed eliminating lateral q/Q waves; (**Sodi-Pallares, D. , Estandia, A. , Soberon, J. , & Rodriguez, M. I. (1950). The left intraventricular potential of the human heart. II. Criteria for diagnosis of incomplete bundle branch block. *American Heart Journal*, 40(5), 655–679. 10.1016/0002-8703(50)90198-0**) (**Willems, J. L. , Robles de Medina, E. O. , Bernard, R. , Coumel, P. , Fisch, C. , Krikler, D. , … Wellens, H. J. J. (1985). Criteria for intraventricular conduction disturbances and pre-excitation. World Health Organizational/International society and federation for cardiology task force ad hoc. *Journal of the American College of Cardiology*, 5(6), 1261–1275. 10.1016/s0735-1097(85)80335-1**)
- (**Surawicz, B. , Childers, R. , Deal, B. J. , & Gettes, L. S. (2009). AHA/ACCF/HRS recommendations for the standardization and interpretation of the electrocardiogram: Part III: Intraventricular conduction disturbances: A scientific statement from the American Heart Association Electrocardiography and Arrhythmias Committee, Council on Clinical Cardiology; the American College of Cardiology Foundation; and the Heart Rhythm Society: Endorsed by the International Society for Computerized Electrocardiology. *Circulation*, 119(10), e235–240. 10.1161/CIRCULATIONAHA.108.191095**) (**Surkova, E. , Badano, L. P. , Bellu, R. , Aruta, P. , Sambugaro, F. , Romeo, G. , … Muraru, D. (2017). Left bundle branch block: From cardiac mechanics to clinical and diagnostic challenges. *Europace*, 19(8), 1251–1271. 10.1093/europace/eux061**)

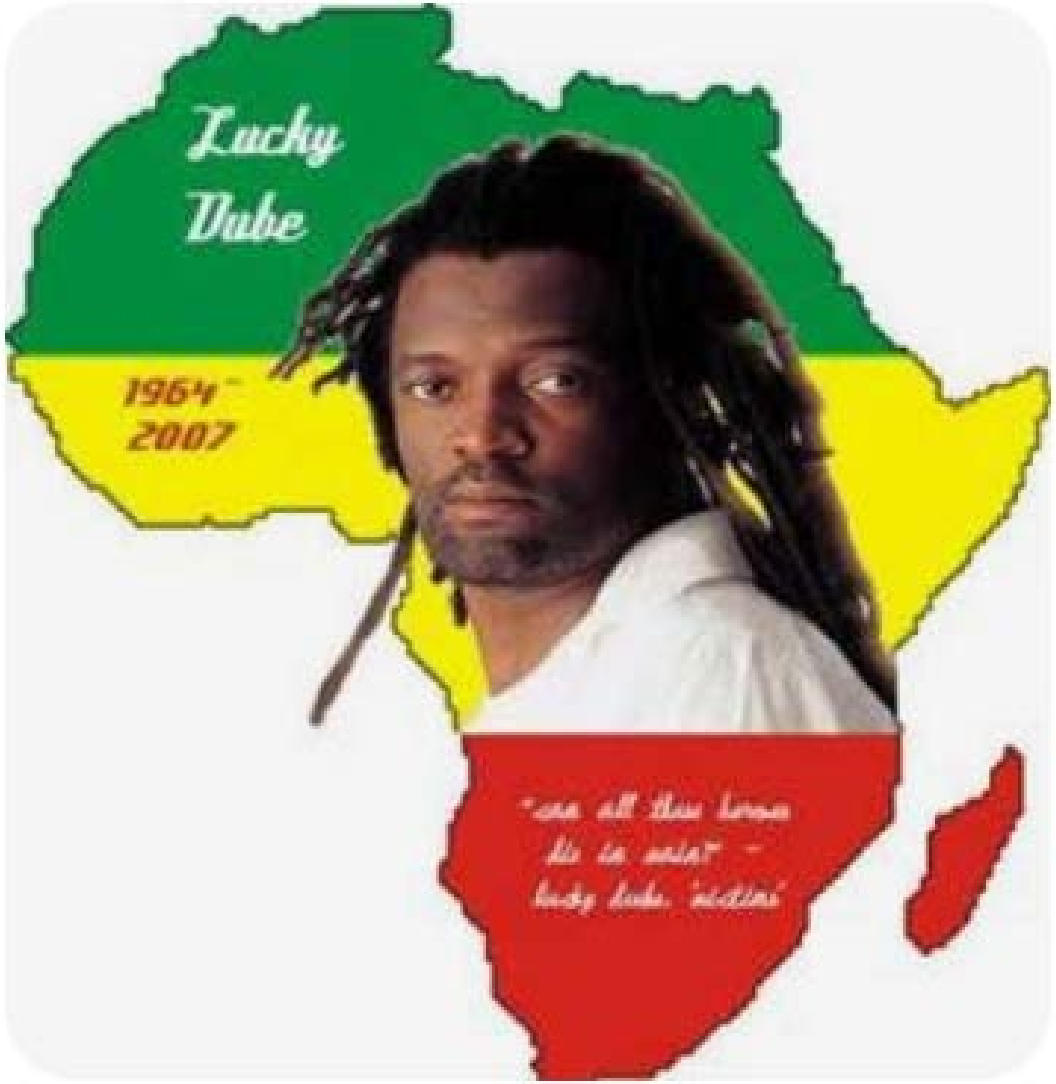
- In electromechanical experiments in dogs with varying degrees of mechanically induced iLBBB, reversal of septal activation (right to left activation) could be documented if sufficient degree of iLBBB was accomplished (**Rodriguez, M. I. , & Sodi-Pallares, D. (1952). The mechanism of complete and incomplete bundle branch block. *American Heart Journal*, 44(5), 715–746. 10.1016/0002-8703(52)90099-9**)

Humm!!.....It's Not Easy

Please go to end (link) for listen the music **entitled Not Easy by Lucky Philip Dube**

Fantastic!!!!

Lucky Philip Dube (3 August 1964 – 18 October 2007) was a South African reggae musician and rastafarian considered to be one of the most important musicians in the history of African music and one of the greatest reggae musicians of all time. The South African born but globally revered reggae legend recorded 22 albums in Zulu, English, and Afrikaans in a 25-year period and was South Africa's as well as Africa's biggest-selling reggae superstar to date. On the evening of 18 October 2007, Dube was murdered in the Johannesburg suburb of Rosettenville by hijackers who allegedly did not recognise him and assumed he was a Nigerian.



Lucky Philip Dube (3 de agosto de 1964 - 18 de octubre de 2007) fue un músico de reggae y rastafari sudafricano considerado uno de los músicos más importantes en la historia de la música africana y uno de los mejores músicos de reggae de todos los tiempos. La leyenda del reggae nacida en Sudáfrica pero reverenciada mundialmente grabó 22 álbumes en zulú, inglés y afrikáans en un período de 25 años y fue la superestrella del reggae con mayores ventas en Sudáfrica y África hasta la fecha.En la noche del 18 de octubre de 2007, Dube fue asesinado en el suburbio de Rosettenville en Johannesburgo por secuestradores que supuestamente no lo reconocieron y asumieron que era nigeriano.

It's Not Easy Lucky Dube Lyrics	2	3
It's Not Easy I remember the day I called mama on the telephone I told her "mama I'm getting married" I could hear her voice On the other side of the telephone She was smiling And she asked me a question that I proudly answered She said: Son did you take time to know her? I said: Mama, she's the best But today it hurts me so To go back to mama and say Mama I'm getting divorced Oh, I'm getting divorced This choice I made Didn't work out the way I thought it would This choice I made It hurts me so mama This choice I made Didn't work out the way I thought it would This choice of mine, oh Mama said to me It's not easy to understand it son But I hope you will make it You'll be happy again	It's not easy to understand it son But I hope you will make it You'll be happy again I remember in church When the preacher read the scriptures You looked so beautiful, so beautiful and innocent I did not know that behind that beauty Lies the true colours that will destroy me in the near future This choice I made Didn't work out the way I thought it would be Oh, mama This choice I made Didn't work out the way I thought it would be Now I'm hurting I remember when I held you By the hand preacher-man read the scriptures Putting words in your mouth Maybe what the preacher-man said Was not something that was within you Now I know what they mean when they say Beautiful woman is another man's plaything Oh Lord, I'm hurting now This choice I made	Didn't work out the way I thought it would This choice of mine, oh Mama said to me It's not easy to understand it son But I hope you will make it You'll be happy again It's not easy to understand it son But I hope you will make it You'll be happy again Click on link for listen the fantastic music https://www.google.com/search?q=you+tube+It%27s+Not+Easy&oq=you+tube+It%27s+Not+Easy&aqs=chrome..69i57j0i13i19i512l3j0i13i19i30l2j0i8i13i19i30l3j0i8i13i19i30i625.5104j0j4&sourceid=chrome&ie=UTF-8#fpstate=ive&vld=cid:66a6ccc6,vid:IwvNG243sjA