

ORIGINAL

Educational intervention for the management of Acute Coronary Syndrome

Intervención educativa para el manejo del Síndrome Coronario Agudo

Ania Gómez Lima¹  

¹Universidad de Ciencias Médicas de Ciego de Ávila. Ciego de Ávila, Cuba.

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ABSTRACT

Introduction: acute Coronary Syndrome (ACS) is a serious and costly health problem that remains a challenge for medical professionals in making appropriate decisions.

Methods: a pre-experimental study was carried out to evaluate the effectiveness of the application of an intervention program to modify knowledge related to ACS by resident physicians and interns of the Internal Medicine service at the “Roberto Rodríguez Fernández” Provincial Hospital of Morón. We worked with a sample of 30 physicians, 11 residents and 19 interns, of the service. The Mc. Nemar statistical test was used to find significant differences between the level of knowledge about ACS, before and after the application of the educational program, nonparametric test for two paired samples with dichotomous variables, and the Wilcoxon signed ranks test was also used for the analysis of ordinal variables in related samples.

Results: participants had a good initial mastery of the definition of ACS and its most common causes. The initial level of knowledge was inadequate for most of them regarding predisposing factors, diagnostic elements, complications and therapeutic management; in these last four aspects there was a significant increase in the percentage of professionals with an adequate level of knowledge, as well as in the general level of knowledge, in which more than half of the participants ended up with a high level.

Conclusion: ACS is a serious health problem worldwide, which requires updated medical preparation for adequate diagnosis and treatment.

Key words: Acute Coronary Syndrome; Angina; Acute Myocardial Infarction; Educational Internship.

RESUMEN

Introducción: el Síndrome Coronario Agudo (SCA) es un problema de salud grave y costoso que sigue siendo un desafío para los profesionales médicos en la toma de decisiones adecuadas.

Método: se realizó estudio pre-experimental para evaluar la efectividad en la aplicación de un programa de intervención para modificar conocimientos relacionados con el SCA por parte de médicos residentes e internos del servicio de Medicina Interna en el Hospital Provincial “Roberto Rodríguez Fernández” de Morón. Se trabajó con una muestra de 30 médicos, 11 residentes y 19 internos, del servicio. Se empleó la prueba estadística Mc.Nemar para hallar diferencias significativas entre el nivel de conocimiento sobre SCA, antes y después de la aplicación del programa educativo, prueba no paramétrica para dos muestras pareadas con variables dicotómicas, se empleó además la prueba de los rangos con signo de Wilcoxon para el análisis de variables ordinales en muestras relacionadas.

Resultados: los participantes presentaban un buen dominio inicial de la definición de SCA y sus causas más comunes. El nivel de conocimientos inicial era inadecuado para la mayoría sobre factores predisponentes,

elementos diagnósticos, complicaciones y manejo terapéutico, en estos últimos cuatro aspectos se logró un aumento significativo del porcentaje de profesionales con nivel de conocimientos adecuado, así como en el nivel general de conocimientos, en el que más de la mitad de los participantes terminó con un elevado nivel. **Conclusión:** el SCA es un grave problema de salud a nivel mundial, que requiere una preparación médica actualizada para un diagnóstico y tratamiento adecuados.

Palabras clave: Síndrome Coronario Agudo; Angina; Infarto Agudo del Miocardio; Intervención Educativa.

INTRODUCTION

Acute Coronary Syndrome (ACS), encompassing Unstable Angina and Acute Myocardial Infarction (AMI), constitutes a grave healthcare concern with noteworthy socioeconomic ramifications worldwide. Its associated mortality and morbidity rates are markedly high, thus underscoring its substantial social and economic significance. Consequently, considerable research endeavors have been dedicated to this domain. Nevertheless, ACS continues to pose a formidable challenge for all involved professionals. Making precise and timely decisions in managing this condition remains a complex task.^(1,2)

In the United States, an estimated 8 million emergency consultations annually are prompted by chest pain or symptoms indicative of ischemic events, with approximately 5 million leading to hospital admissions. Among these cases, about 2 million lack cardiac etiology for their symptoms.⁽³⁾

Ischemic heart disease claims the lives of more than 7 million individuals annually, and in Europe, one in every 7 women succumbs to a myocardial infarction. Hospital admissions for ST-segment elevation myocardial infarction (STEMI) exhibit varying incidence rates across European Society of Cardiology (ESC) member countries.⁽⁴⁾ Among the most extensive STEMI registries was one conducted in Sweden, which reported an annual incidence of 66 cases per 100 000 individuals. Similar data have been compiled in the Czech Republic, Belgium, and the United States, indicating that the incidence rates for STEMI per 100,000 declined from 121 to 77 between 1997 and 2005, while the rates for non-ST-segment elevation myocardial infarction (NSTEMI) showed a slight increase, rising from 126 to 132.^(5,6) Consequently, STEMI incidence appears to be decreasing, with a concomitant rise in NSTEMI incidence. Mortality attributed to STEMI is influenced by numerous factors, including age, Killip class, treatment initiation delay, treatment modality, prior history of myocardial infarction, diabetes mellitus, renal insufficiency, the number of affected coronary arteries, ejection fraction, and treatment.⁽⁷⁾ Hospital mortality for unselected STEMI patients in national registries across ESC countries ranges from 6 % to 14 %.⁽⁸⁾ Recent studies underscore a decline in both acute and long-term mortality after STEMI, thanks to the increased use of reperfusion therapy, primary percutaneous coronary intervention (PCI), contemporary antithrombotic interventions, and secondary prevention measures. Nevertheless, mortality remains considerable, with an approximately 12 % fatality rate at 6 months and higher rates in high-risk patients. This necessitates ongoing efforts to enhance the quality of care, adherence to guidelines, and research initiatives.^(8,9)

Cuban statistics have documented escalating mortality rates from 1970 to 1997, spanning from 114 to 160 per 100,000 inhabitants. Nevertheless, in 1998, a slight decline was observed, with a rate of 154, corresponding to 17,143 fatalities ascribed to ischemic heart disease.^(10,11)

In our context, a comprehensive statistical analysis of the matter was undertaken by examining the medical records of patients diagnosed with Acute Coronary Infarction within the previous year. The investigation revealed shortcomings in both the patient care and post-treatment monitoring processes. Moreover, disparities in medical opinions and, most notably, a marked lack of adherence to the prescribed treatment protocols in our healthcare facility were identified. Interviews were conducted with the physicians and medical interns responsible for the management of these patients, leading to the determination that a key underlying cause of these deficiencies was their unfamiliarity with the established protocols and the guidelines governing good clinical practices.⁽¹²⁾

In light of the described issue, a pertinent question emerged concerning the level of knowledge regarding the management of patients with ACS among residents and medical interns within the Department of Internal Medicine at the "Roberto Rodríguez Fernández" Provincial Hospital in Morón. Consequently, it was deemed necessary to evaluate the efficacy of an intervention program designed to enhance the knowledge of Acute Coronary Syndrome among residents and interns in the department.

To achieve this, a pre-experimental study of the before-and-after design was carried out to evaluate the impact of implementing an intervention program aimed at enhancing knowledge related to ACS among residents and interns. The study spanned from January 1st, 2021, to January 2022.

The study universe encompassed a total of 35 individuals, from which a sample of 30 participants was selected. This sample comprised 11 medical residents and 19 student interns working within the department, all of whom met the inclusion criteria: medical residents and interns who signed the informed consent form and

were directly involved in the care of patients diagnosed with ACS. Exclusion criteria were defined as medical residents and interns who did not have direct involvement in the care of ACS patients or who chose not to participate in the study.

The primary data collection method employed in this research was a survey (see annex). This survey, created by the author and validated through expert opinions from the Internal Medicine Department, served as a fundamental source of information for the study. It was administered both before and after the implementation of the intervention program.

To address the requirement for quick and cost-effective information gathering, the survey was initially administered. Following this, an educational intervention strategy (see annex) was executed, with the aim of improving participants' knowledge and skills in the management of ACS patients in alignment with the institution's intervention protocol for this condition. Subsequently, the survey was administered for the second time, two weeks after the completion of the intervention, to fulfill the specified objectives of the study.

The survey and the level of knowledge were evaluated based on the following scales:

Survey Assessment Scale:

- High: High level of knowledge: 90- 100 points
- Medium: Medium level of knowledge: 60 - 89 points
- Low: Low level of knowledge: less than 60 points

The scoring for the questions will be awarded as follows:

- Question 1: It will have a value of 5 points awarded for selecting the correct item. (a).
- Question 2: It will have a value of 15 points, of which 5 points will be awarded for each correct item (a, c, d).
- Question 3: It will have a value of 15 points, of which 3 points will be awarded for each correct item (b, c, e, f, h).
- Question 4: It will have a value of 5 points awarded for marking the correct item. (b).
- Question 5: It will have a value of 15 points, of which 5 points will be awarded for each correct item [a) Symmetrical T-wave inversion, b) ST-segment elevation, c) Wide and deep Q wave].
- Question 6: It will have a value of 15 points, of which 3 points will be awarded for each correct item [If they link items (1 and a), (2 and b), (3 and a), (4 and b), (5 and c)].
- Question 7: It will have a value of 30 points, of which 5 points will be awarded for each correct item [(1 True), (2 True), (3 False), (4 True), (5 False), (6 True)].

Questionnaire validation

- Question 1 - Adequate: If item (a) is marked - Inadequate: Any other variant.
- Question 2 - Adequate: If items (a, c, d) are marked, or at least 2 of them - Inadequate: If only 1 correct item is marked.
- Question 3 - Adequate: If items (b, c, e, f, h) are marked, or at least 3 of them - Inadequate: If less than 3 correct items are marked.
- Question 4 - Adequate: If item (b) is marked - Inadequate: Any other variant.
- Question 5 - Adequate: If they complete items: a) Symmetrical T-wave inversion b) ST-segment elevation c) Wide and deep Q wave - Inadequate: Any other variant.
- Question 6 - Adequate: If they link items (1 and a) (2 and b) (3 and a) (4 and b) (5 and c), or at least 3 of them - Inadequate: If less than 3 correct items are linked.
- Question 7 - Adequate: if (1 True), (2 True), (3 False), (4 True), (5 False), (6 True) are marked, or at least 4 of them correct- Inadequate: If less than 4 correct items are marked.

A database was established in the Excel software to synthesize all the information, and the data were condensed using absolute frequencies and corresponding percentages. To analyze the sociodemographic variables, descriptive statistics were applied, encompassing measures such as mean and standard deviation.

To assess the effectiveness of the educational intervention, the McNemar statistical test was employed to identify significant differences in the level of knowledge regarding Acute Coronary Syndrome before and after implementing the educational program. The McNemar test is a non-parametric test used for paired samples with dichotomous variables. Furthermore, the Wilcoxon signed-rank test was utilized for the analysis of ordinal variables within related samples.

This study was conducted in compliance with the regulations outlined in the Declaration of Helsinki (Somerset West, Republic of South Africa; October 1996). Informed consent was obtained from all selected survey participants. The voluntary nature of participation was explained, and it was emphasized that the data would be treated confidentially, and the participants' identities would be anonymized using identification codes. Autonomy was upheld, since the moment which each participant made an individual decision to participate

or not in the research. They were provided with necessary and relevant information about the study in the presence of the researcher, and both parties subsequently signed the informed consent form. Throughout the study, fair and beneficial interaction with the participants was maintained, adhering to the principles of Autonomy, Beneficence, Non-Maleficence, and Justice.

RESULTS Y DISCUSSION

The study encompassed a total of 30 participants, comprising 19 medical interns and 11 internal medicine residents. Among the residents, there were 4 in their first year, 5 in their second year, and 2 in their third year of internal medicine specialization.

Table 1. Level of knowledge about ACS. Morón. 2022

Level of knowledge about ACS		Before		After		Mc. Nemar test
		N	%	N	%	
Level of knowledge about the definition	Adequate	28	93,3	30	100	p = 1,000 (p > 0,05)
	Inadequate	2	6,7	0	0	
Level of knowledge about the most common causes	Adequate	26	86,7	30	100	p = 0,062 (p > 0,05)
	Inadequate	4	13,3	0	0	
Level of knowledge about predisposing factors	Adequate	16	53,3	30	100	p = 0,000 (p < 0,05)
	Inadequate	14	46,7	0	0	
Level of knowledge about the basis of diagnostic	Adequate	12	40,0	26	86,7	p = 0,000 (p < 0,05)
	Inadequate	18	60,0	4	13,3	
Level of knowledge about complications	Adequate	5	16,7	17	56,7	p = 0,001 (p < 0,05)
	Inadequate	25	83,3	13	43,3	
Level of knowledge about therapeutic management	Adequate	10	33,3	25	83,3	p = 0,000 (p < 0,05)
	Inadequate	20	66,7	5	13,3	
Total		30	100	30	100	

Table 1 illustrates the level of knowledge about ACS before and after the intervention.

The data indicates that, before the intervention, 28 professionals (93,3 %) possessed an adequate level of knowledge, while only 2 (6,7 %) were unable to identify the correct concept of the disease. In the post-intervention assessment, all participants responded correctly. Given the initially satisfactory results, there were no significant differences found when analyzing the McNemar Test results, with a p-value equal to one. The conceptualization of a disease is the first aspect to master for its correct identification by medical professionals. Despite being a purely theoretical element, the participants demonstrated a majority proficiency in it.

In the initial assessment, 26 participants (86,7 %) were able to identify correctly these causes, while 4 of them (13,3 %) could not. In the final questionnaire, all respondents (100 %) answered correctly. Although the percentages of knowledge level experienced a positive change, there were no significant differences observed when analyzing the results of the statistical test used.

It can be observed that prior to the intervention, only 16 respondents (53,3 %) possessed adequate knowledge on this aspect. By the end of the study, this figure had risen to 30, representing 100 % of the participants. When analyzing the result of the statistical test used, with a significance level well below 0,05, it can be affirmed that the achieved percentage change was significant. The predisposing factors of Acute Coronary Syndrome are important elements that every healthcare professional dealing with this condition should master. They constitute a tool for prevention, preventing individuals from falling ill, and providing support for the proper management of the patient while offering guidance to their family members.

It is evident that in the initial questionnaire, only 12 professionals (40 %) had an adequate level of knowledge. Upon administering the final survey, 26 (86,7 %) of them exhibited a qualified level of knowledge considered adequate, with only 4 (13,3 %) continuing to hold inadequate knowledge on this subject. The Mc. Nemar test applied in this analysis deemed the achieved percentage change with the intervention program to be significant, as it yielded a p-value well below 0,05. A correct understanding of the diagnostic foundations of any disease, in this case, Acute Coronary Syndrome, is a mandatory requirement for medical personnel to ensure the proper management of the condition and the patient's optimal recovery. This eliminates the need for unnecessary and costly diagnostic procedures that could be iatrogenic for the patient. These results align with those reported in the literature.^(13,14)

Prior to the intervention, only 5 individuals (16,7 %) demonstrated a proficient knowledge level in this

aspect, which subsequently increased to 17 (56,7 %) following the administration of the final questionnaire. The analysis using the Mc. Nemar test, revealed that the change in knowledge levels achieved through the intervention program was statistically significant, with a p-value of less than 0,05. It is of paramount importance that healthcare professionals caring for patients with this condition possess a comprehensive understanding of potential complications. This knowledge equips them to proactively prevent these complications whenever feasible, promptly identify their emergence, and take appropriate measures to address them.

Similarly, before the implementation of the training program, only 10 of the professionals demonstrated proficiency in the subject matter, accounting for 33,3 % of the total. Following the implementation of the program, 25 of them (83,3 %) exhibited a level of knowledge deemed adequate, as per the validation of the designed questionnaire. The percentage alterations before and after the intervention denoted a substantial shift, with a statistical test value well below 0,05. It is of paramount importance for the physician dealing with this condition to be thoroughly knowledgeable in its appropriate management, thereby minimizing the possibility of complications, including fatal outcomes.

Table 2. Overall knowledge level about ACS, before and after. Morón. 2022						
Overall knowledge level	Before		After		Total	
	N	%	N	%	N	%
Low	7	100	9	39,1	16	53,3
Medium	0	0	12	52,2	12	40
High	0	0	2	8,7	2	6,7
Total	7	100	23	100	30	100
Wilcoxon signed-rank test: -4,695 p = 0,000 (p < 0,05)						

Table 2 demonstrates the distribution of participants based on their overall knowledge levels regarding Acute Coronary Syndrome, assessed before and after the intervention. It is evident that, in the initial questionnaire, 16 participants (53,3 %) exhibited a low overall knowledge level. Out of these, 7 transitioned to a medium level, and 9 achieved a high level. Among the 12 participants (40 %) who initially had a medium overall knowledge level, all of them progressed to a high overall knowledge level, while the 2 participants (6,7 %) who initially had a high level maintained their status. The final modifications in the overall knowledge levels, in comparison to the initial levels, showed a significant change when analyzing the results of the Wilcoxon signed-rank test, with a p-value significantly lower than 0,05.

Based on the final assessment, it can be affirmed that the implemented educational program has effectively met the initial objectives. Thus, the program design, encompassing the instructional staff, covered topics, and the duration of the activity, seems to be well-suited for eliciting a positive transformation in the knowledge levels of healthcare professionals concerning this subject.

CONCLUSIONS

Acute Coronary Syndrome is considered as one of the major global health issues, particularly in the context of Cuba, characterized by elevated morbidity and mortality rates, despite the continuous progress in science and technology.⁽¹⁵⁾ Any physician encountering patients presenting any manifestation of Acute Coronary Syndrome (particularly the clinical presentation), should be equipped with a high degree of preparedness as in this condition, the timely and precise diagnosis, coupled with the prompt initiation of vigorous therapeutic interventions, holds the potential to be life-saving and profoundly influences the patient's subsequent convalescence. Hence, it is of utmost importance to uphold a continuous educational approach on the subject, accompanied by the development of diverse pedagogical strategies, such as the present one, to elevate the level of comprehension, especially among professionals in training. This equips them to adhere faithfully to the fundamental principle of a physician: “Primum non nocere” or “First, do no harm”, thereby ensuring the delivery of exceptional medical care, a commitment for all healthcare professionals.

RECOMMENDATIONS

The author strongly advocates for regular updates and continuous education on subjects as pivotal for physicians as the one elucidated in this study. Moreover, this intervention proposition should be recurrently implemented to guarantee that medical residents and interns consistently achieve and maintain an adequate level of knowledge regarding this matter.

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CONFLICT OF INTEREST

There are no conflicts of interest.

AUTHORSHIP CONTRIBUTION

Conceptualization: Ania Gómez Lima.

Research: Ania Gómez Lima.

Methodology: Ania Gómez Lima.

Project management: Ania Gómez Lima.

Original writing-drafting: Ania Gómez Lima.

Writing-revision and editing: Ania Gómez Lima.

ANEXO 1

Programa de intervención educativa

Objetivo General: Incrementar el nivel de conocimiento de los grupos seleccionados sobre la Síndrome Coronario Agudo (SCA) en cuanto a definición, epidemiología, manifestaciones clínicas, prevención de las complicaciones y manejo terapéutico.

Específicos:

1. Definir el concepto de Síndrome Coronario Agudo describir la situación actual del mismo.
2. Explicar la epidemiología.
3. Explicar las manifestaciones clínicas.
4. Orientar las principales medidas para la prevención de las complicaciones.
5. Proporcionar una conducta a seguir adecuada.

Requisitos de ingresos: Médicos residentes de Medicina Interna, Clínicos, internos y otros profesionales en actividades afines con el tema. Dominar el idioma español.

Duración: 6 semanas.

Modalidad: Taller, Conferencias.

Perfil del egresado: El egresado de este Taller contará con las competencias necesarias para desempeñar correctamente sus funciones en el diagnóstico y tratamiento del Síndrome Coronario Agudo en el nivel secundario de atención.

Estructura del plan de estudio y aspectos organizativos: 6 semanas lectivas, 2 encuentros semanales, total de horas 48. Se realizó escalonadamente con una matrícula de 35 profesionales de la salud en cada semana de taller hasta terminar con la preparación profesional de todos los que se encuentran brindando asistencia en el hospital.

Recursos y medios de enseñanza: Pizarra y plumones, retroproyector, documentos bibliográficos, protocolos y artículos para estudio, computadora e internet para obtener información actualizada de bases de datos bibliográficas.

Actividades:

Actividad 1

- Tema1: Introducción del Programa Educativo.
- Objetivos: 1. Presentar a los participantes y crear relaciones de afectividad entre ellos; 2. Presentar el curso y sus objetivos; 3. Aplicar cuestionario inicial; 4. Motivar a la divulgación de los temas aprendidos durante el desarrollo de las actividades con facultativos y profesionales de la salud.

Actividad 2

- Tema 2: Introducción al tema de Síndrome Coronario Agudo
- Objetivos: 1. Definir términos a recordar durante el curso de la intervención; 2. Mostrar la situación mundial de Síndrome Coronario Agudo.
- Contenidos: Definiciones relacionadas con Síndrome Coronario Agudo. Situación mundial, cubana y del hospital en cuanto a Síndrome Coronario Agudo.
- Métodos: Conferencias, clases prácticas, debates en grupos y trabajo de terreno.

Actividad 3

- Tema 3: Clasificación de Síndrome Coronario Agudo
- Objetivos: 1. Reconocer las entidades que conforman el Síndrome Coronario Agudo; 2. Explicar la epidemiología.
- Contenidos: Clasificación del Síndrome Coronario Agudo. Epidemiología. Factores de riesgo. Prevención.
- Métodos: Conferencias, clases prácticas, debates en grupos y trabajo de terreno.

Actividad 4

- Tema 4: Manifestaciones Clínicas.
- Objetivos: 1. Describir las manifestaciones clínicas; 2. Destacar la importancia de su reconocimiento.
- Contenidos: Cuadro clínico. Métodos diagnósticos (hallazgos electrocardiográficos y enzimáticos). Complicaciones. Pronóstico.
- Métodos: Conferencias, clases prácticas, debates en grupos y trabajo de terreno.

Actividad 5

- Tema 5: Conducta a seguir frente a un Síndrome Coronario Agudo
- Objetivos: 1. Explicar conducta a seguir ante la sospecha de un Síndrome Coronario Agudo; 2. Destacar la importancia de un tratamiento precoz.
- Contenidos: Conducta a seguir en una unidad de urgencias y la importancia de la intervención precoz. Tratamiento intrahospitalario y rehabilitación precoz. Actualidades terapéuticas.
- Métodos: Conferencias, clases prácticas, debates en grupos y trabajo de terreno.

Actividad 6

- Tema 6: Conclusiones.
- Objetivo: 1. Aplicación de la encuesta final.

Dos semanas después de haber terminado el Programa Educativo, se aplicó nuevamente el cuestionario inicial, con las mismas características que en la primera etapa, para comprobar los conocimientos adquiridos como resultado de la intervención.

ANEXO 2

Acta Consentimiento Informado

Servicio de Medicina Interna

Hospital Provincial Docente “Roberto Rodríguez” de Morón.

Compañero (a):

Por este medio le comunicamos a Ud. que ha sido escogido (a) para la realización de una investigación donde usted será el objeto de estudio, sobre una estrategia de intervención educativa para el manejo del Síndrome Coronario Agudo. Sólo necesitamos su colaboración. Esperamos su ayuda y facilitación de los medios de información.

Comprendo que mi participación es voluntaria, que puedo retirarme cuando lo desee del mismo, sin que sea necesario explicar las causas y para expresar libremente mi conformidad de participar en el estudio firmo el siguiente modelo.

Si desea usted participar en el estudio exponga aquí su consentimiento:

Nombre y Apellidos del sujeto _____ Firma del sujeto: _____

ANEXO 3

Encuesta sobre nivel de conocimiento y desempeño.

Servicio de Medicina Interna

Hospital Provincial Docente “Roberto Rodríguez” de Morón

Se está realizando un estudio acerca de nivel de conocimiento adquirido, desempeño y habilidades de profesionales de la salud en Síndrome Coronario Agudo, con vistas a conocer los problemas existentes en el proceso de enseñanza-aprendizaje y buscar las soluciones apropiadas. Para lograrlo, necesitamos que nos ayude contestando con sinceridad algunas preguntas sencillas. Esta información tiene carácter anónimo; no tiene que escribir su nombre en el cuestionario.

Edad: ____ Sexo: ____

Marque con una x según corresponda.

- Interno ____
- Residente de 1er año ____
- Residente de 2do año ____
- Residente de 3er año ____

1. Se define como Síndrome Coronario Agudo. Marque según corresponda.

- a) ____ Enfermedad del miocardio producida por la falta de riego sanguíneo en él, o por la desproporción entre el aporte del flujo sanguíneo coronario que puede ser normal y las necesidades miocárdicas que pueden estar muy elevadas.
- b) ____ La presencia de dolor precordial opresivo de duración variable.
- c) ____ Grupo heterogéneo de enfermedades del miocardio que se asocian a disfunción mecánica y /o

eléctrica del mismo.

2. Las principales causas de Síndrome Coronario Agudo son.

- a) ☐ Aterosclerosis.
- b) ☐ Insuficiencia Cardíaca
- c) ☐ Alteraciones de la microcirculación coronaria
- d) ☐ Espasmo coronario
- e) ☐ Exceso de esfuerzos físicos

3. Factores que incrementan el riesgo de presentar un Síndrome Coronario Agudo. Marque según corresponda.

- a) ☐ Alcoholismo.
- b) ☐ Hipertensión Arterial
- c) ☐ Tabaquismo.
- d) ☐ Grupo sanguíneo O
- e) ☐ Obesidad
- f) ☐ Hipercolesterolemia
- g) ☐ Procedencia rural
- h) ☐ Sexo Masculino.

4. Acerca del diagnóstico del Síndrome Coronario Agudo. Marque la respuesta que considere correcta.

- a) ☐ Se basará en antecedentes y en el Cuadro Clínico del paciente (Anamnesis y Examen Físico).
- b) ☐ Se basará en el Cuadro Clínico del paciente (Anamnesis y Examen Físico), Electrocardiograma y exámenes humorales (Enzimas).
- c) ☐ Se basará en el cuadro clínico referido por cardiología, y Electrocardiograma

5. Complete los espacios en blanco con las palabras que se ofrecen a continuación según corresponda acerca de la traducción electrocardiográfica de los eventos que ocurren en el Síndrome Coronario Agudo con elevación del ST.

- a) Cuando ocurre isquemia se observa_____.
- b) La lesión miocárdica aguda se traduce como _____.
- c) La ausencia de actividad eléctrica en el tejido miocárdico se manifiesta como _____ y representa necrosis del mismo.

PR prolongado, Elevación del segmento ST, Ausencia de onda P, Inversión simétrica de la onda T, Onda Q ancha y profunda, Aparición de onda U.

6. Relacione columna A con la columna B en cuanto al momento de aparición de las principales complicaciones del Síndrome Coronario Agudo.

Columna A	Columna B
a) Complicaciones inmediatas	1. ☐ Muerte súbita.
b) Complicaciones mediatas	2. ☐ Pericarditis epiestenocárdica.
c) Complicaciones tardías	3. ☐ Arritmias ventriculares graves.
	4. ☐ Disfunción del músculo papilar.
	5. ☐ Seudoaneurisma ventricular.

7. Acerca del manejo terapéutico del Síndrome Coronario Agudo responda Verdadero (V) o Falso (F) según considere.

- a) ☐ Los pacientes que acuden al hospital con Síndrome Coronario Agudo deben ser tratados en una Unidad de Cuidados Intensivos.
- b) ☐ El Síndrome Coronario Agudo sin elevación del segmento ST incluye la Angina Inestable Aguda y el Infarto Agudo del Miocardio sin elevación del ST.
- c) ☐ Tanto el Síndrome Coronario Agudo con elevación del segmento ST como el Síndrome Coronario Agudo sin elevación del segmento ST requieren tratamiento trombolítico.
- d) ☐ Las medidas generales en el Síndrome Coronario Agudo incluyen: reposo, alivio del dolor, monitorización cardiovascular, garantizar una vía venosa etc.
- e) ☐ Los anticoagulantes orales son siempre una indicación en el Infarto Agudo del Miocardio con elevación del ST.
- f) ☐ Tanto la trombolisis precoz como el uso de betabloqueadores en el Infarto Agudo del Miocardio con

elevación del ST han demostrado mejorar la supervivencia.