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RESEARCH ARTICLE

“IMPACT OF AYUSHMAN BHARAT PRADHAN MANTRI JAN AROGYAYOJANA (AB-PMJAY) SEHAT SCHEME ON CARDIAC HEALTH CARE DELIVERY IN KASHMIR VALLEY- A SINGLE CENTRE STUDY”

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Abstract

For proper use of health care services and to guarantee better health results, Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme, one of the biggest healthcare schemes sponsored by the Government of India, was launched by Honorable Prime Minister Shri Narendra Modi. Aim of this study was to evaluate the effect of Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme insurance on cardiac health care delivery in Kashmir valley. The current study was a retrospective observational study. One year data of all cardiac interventional procedure done for one financial year, before and after launch of (AB-PMJAY) SEHAT scheme was collected and analyzed. In our study we found that there was significant increase in number of all interventional cardiac procedures performed after the launch of (AB-PMJAY) SEHAT scheme. There was an increase in both elective and emergency procedures. More interventional devices, including CRT-P, CRT-D, AICD, were implanted after the launch of (AB-PMJAY) SEHAT scheme.

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Introduction:-

Cardiovascular diseases (CVDs) are the most prevalent causes of death worldwide. According to WHO 31% of all deaths are due to cardiovascular diseases. In 2016, 54.5 million people in India were estimated to have cardiovascular diseases. Age-standardised estimates from the Global Burden of Disease study (2010) show that cardiovascular disease (CVD) is responsible for over a quarter (24.8%) of all deaths in India¹. By 2016, low- and middle-income nations accounted for more than 75% of deaths caused by cardiovascular disease². The expense of patient care is constantly rising as a result of technological innovation³. Significant number of patients are unable to avail quality health care, especially surgical procedures, due to economic factors. Thus, the presence of health insurance becomes vital. Presence of health insurance is associated with more appropriate use of health care services and better health outcomes. Individuals without health insurance are less likely to receive recommended preventive, screening and definitive treatment as per standard guidelines. Lack of insurance is associated with delay in elective surgical and interventional procedures. To address this issue Honorable Prime Minister Shri Narendra Modi Launched Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme, one of the biggest healthcare schemes sponsored by the Government of India. AB-PMJAY SEHAT scheme covers the cost of hospitalization, pre-hospitalization, medication, and post hospitalization expenses incurred during the treatment,

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which is applicable to almost all tertiary and secondary care procedures. The aim of current study was to analyse impact of Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme on delivery of cardiac health care. This study was conducted in cardiology department of SMHS hospital, one of the two premier hospitals in Kashmir valley. This was a retrospective observational comparative Study.

Aims and Objectives:-

Aim of this study was to analyse the impact of Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme insurance on cardiac health care delivery in Kashmir valley.

Material and Methods:-

The current study is a retrospective observational study. It was a comparative study in which number of cardiac interventional procedures performed, for a duration of one calendar year, before and after the launch of (AB-PMJAY) SEHAT scheme were analyzed and compared. This study was conducted in cardiology department of SMHS hospital (an associated hospital of GMC Srinagar). We collected cardiac catheterization laboratory data of one year, after launch of (AB-PMJAY) SEHAT scheme, from January 1st to 31st December 2021. Similarly, data was collected for one calendar year (from January 1st to 31st December 2018) before launch of (AB-PMJAY) SEHAT scheme. Number of cardiac interventional procedure like coronary angiography coronary angioplasties, permanent pacemakers, CRT-P, CRT-D, AICD, RFA and device closures were analyzed for these two years.

Statistical method:

Current study was an observational comparative study. Data was represented in numbers. Students t-test was used for comparative analysis between two groups. P value <0.05 was considered significant.

Observation and Results:-

Table 1 and Table 2 represents the number of interventional procedures performed in each month of year 2018 and 2021 respectively. During year 2018(pre-PMJAY) a total of 780 coronary angiographies were done as compared to 1043 during year 2021 with a significant p value of <0.001(table 3, fig 1). 565 coronary angioplasties were done during year 2018. During year 2018 only 390 coronary angioplasties were done compared to 565 coronary angioplasties during year 2021(p<0.001). 265 permanent pacemakers were implanted in year 2018 in comparison to 419 permanent pacemaker implantations done during year 2021(p<0.001). During year 2021, 20 CRT-P, 4 CRT-D and 9 AICD devices were implanted, on the other hand during year 2018, 3 CRT-P (p<0.001), 1 CRT-D (P<0.001) and 5 AICD (P<0.01) were implanted (table 3, fig 1). 61 EPS/RFA studies were done in year 2021 in comparison to 49 procedures done during 2018 (p<0.01). 18 other procedures, which included PTMC and ASD device closures, were done in year 2021 in comparison to only 8 procedures performed during 2018 (P<0.01) (table 3, fig 1).

Conclusion:-

In our study we found that there was significant increase in number of all interventional procedures performed after the launch of (AB-PMJAY) SEHAT scheme. There was increase in both elective and emergency procedures. It was seen that after the launch of PMJAY scheme all eligible patient admitted with ACS had undergone coronary angiography and angioplasty were ever required as per guidelines. In our study we found a 144% increase in number of coronary angioplasties performed after launch of PM JAY scheme. More high-end interventional devices, including CRT-P, CRT-D, AICD, were implanted after the launch of (AB-PMJAY) SEHAT scheme. There was more than 400% increase in performance of high-end interventional devices after launch of this scheme. Overall, there has been significant improvement in health care delivery to otherwise non affording individuals. Within coming years, with increasing awareness in common masses about the PMJAY Sehat scheme, more and more people shall avail the benefits of this scheme.

Discussion:-

Cardiovascular diseases (CVDs) are most common causes of death worldwide. The price of consumables and technological advancements both contribute to an ongoing increase in the cost of patient care. Significant number of patients are unable to avail quality care due to economic constraints. Presence of health insurance is associated with more appropriate use of health care services. Since the launch of Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme, there has been significant improvement in health care delivery system in Kashmir valley. In our study we found a significant increase in number of patients accessing the health care system. There was global increase in all cardiac interventional procedures performed after the launch of Ayushman Bharat Pradhan Mantri Jan ArogyaYojana (AB-PMJAY) SEHAT scheme in Kashmir valley.

Tables and figures:**Table 1:-** Number of cardiac interventional procedures performed in each month of year 2018.

2018	Coronary angiography	Coronary angioplasty	Pacemaker implantation	CRT - P	CRT - D	AIC D	RF A	others
January	72	38	18	0	0	0	7	2
February	60	42	25	1	0	0	5	0
March	47	33	31	0	0	0	6	1
April	22	12	16	0	0	0	3	0
May	66	40	29	1	0	0	7	1
June	40	18	26	0	0	2	2	0
July	69	31	26	0	0	0	3	0
August	44	26	17	0	1	0	4	2
September	70	32	23	0	0	0	6	0
October	54	38	14	0	0	1	2	0
November	67	41	19	1	0	2	3	1
December	60	39	21	0	0	0	1	1
TOTAL	780	390	265	3	1	5	49	8

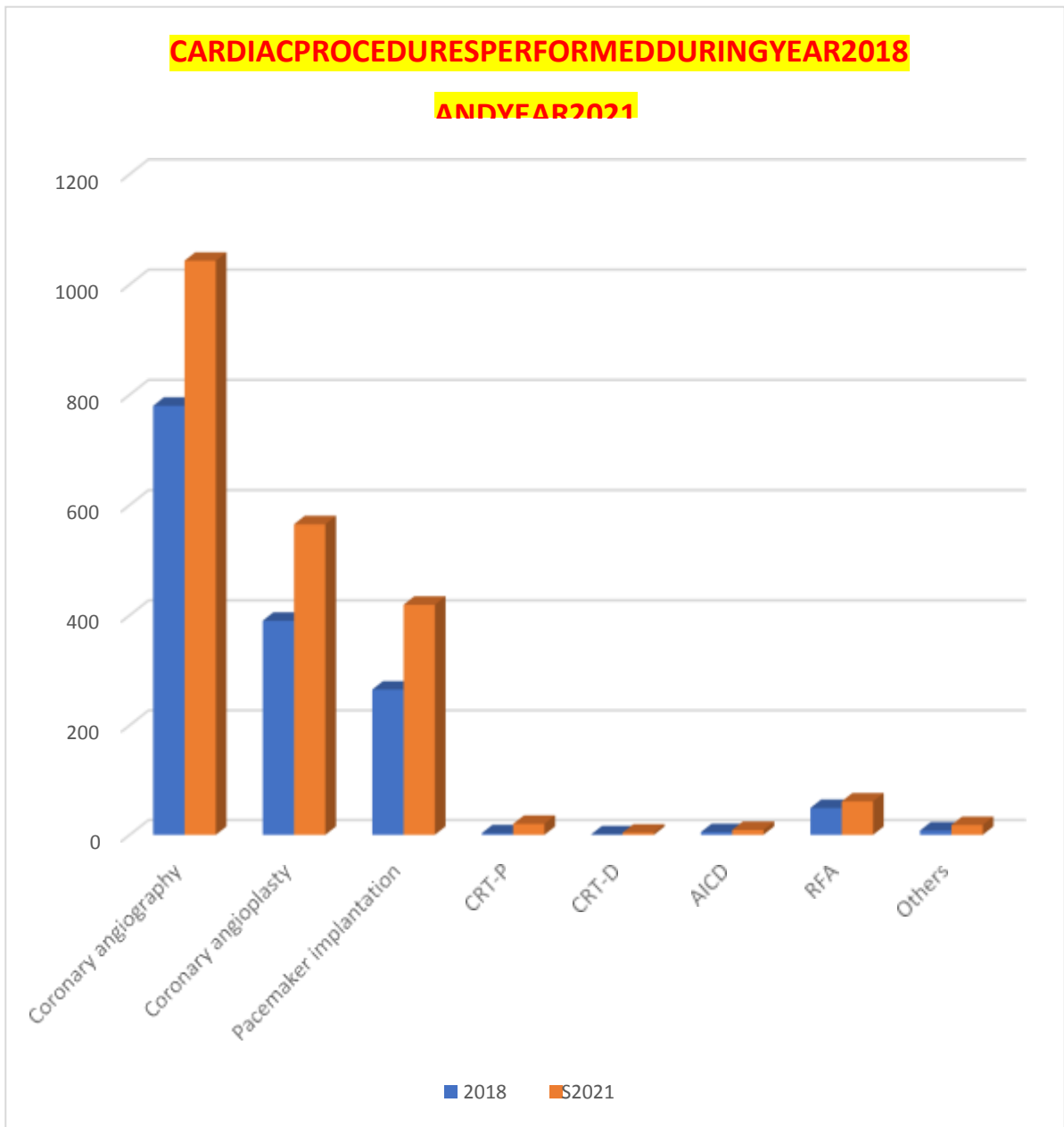
Table 2:- Number of cardiac interventional procedures performed in each month of year 2021.

2021	Coronary angiography	Coronary angioplasty	Pacemaker implantation	CR T-P	CR T-D	AIC D	RF A	Others
Jan	70	48	24	0	0	1	9	3
Feb	73	25	34	0	0	0	3	0
March	103	58	45	0	0	1	6	2
April	66	39	31	0	0	0	8	1
May	74	44	20	0	0	0	2	1
June	54	25	34	0	0	2	3	0
July	57	48	37	0	2	0	1	1
August	79	42	53	0	0	0	1	1
September	89	39	39	7	0	2	6	1
October	92	42	36	7	1	0	10	3
November	124	64	27	4	0	1	12	1
December	162	91	39	2	1	2	8	4
TOTAL	1043	565	419	20	4	9	61	18

Table 3:- Number of various cardiac interventional procedures performed during year 2018 and year 2021:

Procedure	2018	2021	p value
	Pre-PMJAY	Post-PMJAY	
Coronary angiography	780	1043	<0.001
Coronary angioplasty	390	565	<0.001
Pacemaker implantation	265	419	<0.01
CRT-P	3	20	<0.001
CRT-D	1	4	<0.01
AICD	5	9	<0.01
RFA	49	61	<0.01
Others	8	18	<0.01

Fig 1:- Bar diagram representing Cardiac interventional procedures performed during year 2018 and year 2021.



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