81mm Mortars

The Forgotten Platoon

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The Joint Readiness Training Center (JRTC) at Fort Chaffee, Arkansas, is the equipment and doctrine training center for our light, airborne, and air assault task forces. At the Center, when maneuver units make contact with the opposing force (OPFOR), the engaged forces are usually no more than 100 to 300 meters apart because of the close nature of the terrain, the tactics and techniques employed by both sides, and the effective range of weapons.

In these conditions, the 81mm mortar can offer many advantages to the maneuver units, with its responsiveness and its ability to deliver fires close to the units and beyond the effective range of any other infantry weapon systems.

Despite these advantages, the maneuver units rarely call for mortar fire support. Instead, they call for artillery fire or they try to close with and engage the OPFOR with small arms fire. Maneuver units are finding out, though, that without mortar and artillery support, in contacts with the OPFOR they usually suffer heavy casualties.

To prevent these losses, units training at the JRTC need to reemphasize the advantages of using their indirect fire assets, and especially their mortars, to damage their opponents. Mortar rounds can be adjusted onto a target relatively quickly and give the maneuver force commander an opportunity to gain control and dominate most small unit engagements. But this adjustment of fires can be helpful only if the maneuver unit properly coordinates its fire support plan, and if it employs the proper techniques for adjusting fires, establishing priority targets, and overseeing the needed shell fuze combinations.

Observations at the JRTC reflect that when mortars are used for fire missions, their fires are not properly adjusted onto the targets, and the mortar crews themselves take too long to place effective fires on the targets. Most of these problems can be traced back to the mortar platoon leader's planning and coordination, although the maneuver force commander and his staff are not completely blameless.

The following are several issues that mortar platoon leaders and infantry platoon leaders and commanders need to consider to improve their mortar fire support:

Integration with the Scheme of Maneuver. Too often, the mortar platoon leaders do not do a good job of coordinating with the S-3 and the fire support officer (FSO). In too many cases, the trend is for a mortar platoon leader to receive a firing position, a priority of fire, and a target list with little discussion concerning the integration of the target list with the mortar fire support he is expected to give in a close-in battle.

The battalion S-3 and FSO are responsible for developing a fire support plan that integrates the effects of fire support into the scheme of maneuver. But battalion schemes of maneuver tend to focus on movement to and occupation of an area rather than on how the battalion will fight the battle. Naturally, poor planning and coordination by the maneuver elements will lead to the poor execution of any fire support plan. To integrate the fire support assets, battalion staffs need to reconsider the effect fire support will have on the enemy.

The current procedure is to plan fire support in low intensity combat situations by selecting target reference points on key terrain instead of on suspected enemy locations. Units also tend to select priority targets on key terrain features in the centers of their areas of operation.

The problem with our current targeting procedure is that it is not linked to the scheme of maneuver. The units begin their movement into an area and do not call for fire support until after they have made contact. This leads to reactive and unproductive fire support, because firefights at 100 to 300 meters are generally over within the time it takes to adjust fires. Instead, a unit needs to plan its supporting fires and the effects it wants on suspected enemy locations so as to support its scheme of maneuver.

Communication. The mortar platoon leader needs to coordinate with the forward observers and the FSOs for the exact frequency and call signs they will be using during each phase of the operation. He must not neglect any attached or supporting units that may not have forward observers, such as the antiarmor platoon, tank platoons, scouts, engineers, aviation, and combat trains.

Habitually, the mortars will monitor their own internal frequency and the battalion command net. The other units may monitor either their own internal nets, the coordinating or fire direction artillery nets, or the battalion command net. One of the reasons the mortars are easily forgotten or not called on for fire missions is that few units will preset their fire support radios on the mortar platoon frequency.

The most common radio net for the FOs to monitor is their internal company nets (to the 60mm mortars) and the coordinating fire net so they can obtain artillery fire support. The unit that has priority of fires from the 81mm mortars is usually the only one to monitor the mortar platoon frequency. As a result, when the units begin their movement the mortars may be able to reach only one company and the battalion FSO for radio checks and position updates.

The solution to these communication problems is for the maneuver units to conduct fire support communication exercises (COMEXs) and to preset their radio frequencies so they can reach the 81mm mortar platoon quickly. These COMEXs must involve more than putting all the fire support radios on a common frequency and calling for a radio check; these types of checks do no more than verify that the radios are serviceable. Instead, the players in a fire support COMEX need to switch their frequencies to ensure that they can raise the different fire support assets.

Fire Control Measures. Mortar platoons frequently deploy with blank maps in their fire direction centers, because the mortar platoon leaders are unfamiliar with the use of graphic control measures and also overly concerned about having their fire direction center (FDC) vehicles captured by the enemy. But the most frequently voiced rationale for not using graphics or situational reports on the FDC map is that the platoons do not use graphics at their home stations. At the very least, the FDC map needs to reflect the battalion boundaries and battalion graphics. Without these graphics, the mortar platoon FDC is unaware of the range requirements, clearances for fire, the need to update priority targets, and the like. Most important, though, a lack of graphics is one of the major factors in the high number of friendly casualties caused by mortar fire.

These graphics also need to include no fire areas (NFAs) and restrictive fire areas (RFAs). To reduce the potential for fratricide, the FDC should plot the locations of all stationary units and the appropriate NFA around each to make sure no rounds hit friendly positions. Some of these stationary units are military intelligence assets (ground surveillance radar and the like), communication sites, scouts, tactical operations centers, casualty collection points, and

other fire support assets such as U.S. Marine Corps fire coordination control teams and combat observation lasing teams. In addition, rear echelon units that are in range of the mortars need to be plotted.

Range of the Mortars. It is not always possible for mortars to have a 6400-mil capability out to their maximum range unless they are set up in an open field or an orchard with trees that do not mask or limit overhead clearance. Instead, for survivability and concealment, the mortars are frequently set up at the edge of a treeline. This positioning not only limits their 6400-mil capability but may also cause mask or overhead clearance problems that preclude firing into an area in support of a unit in contact.

To compensate for limitations in range and sectors of fire, the mortar platoon leader needs to identify alternate positions that are reasonably close to the primary positions so the platoon can provide fire support into all occupied or observed areas. But if the platoon leader does not coordinate with the battalion S-3, the FSO, and the maneuver units regarding the areas in which the units plan to operate, the mortars may be tasked for a fire mission they cannot fire. Range and coverage criteria, therefore, should be a major concern when the platoon leader selects his positions.

Also, the 81mm mortars are normally positioned so they can respond to the maneuver units' requests with their high explosive (HE) rounds. In low intensity combat, however, the mortar platoon leader also needs to consider placing his mortars so that they can respond to requests for illumination rounds, which have a limited maximum range. (The maximum range of HE is 4,595 meters while the range of illumination is only 2,950 meters.)

Movement Plans for Each Company. In movement to contact operations, the mortars need to monitor the units' progression and ensure that the mortars' sectors of fire are coordinated with the company and platoon patrol plans.

Mortar platoon leaders rarely coordinate in detail with the S-3 or the company commanders so they can portray graphically the tentative routes of movement, target lists, time schedules, and communications. Usually, the mortar platoon leader is given only a target list and is expected to be able to provide continuous and timely fire support with little other guidance.

If the mortar platoon is to support a maneuver unit, the mortar platoon leader absolutely must be fully aware of the scheme of maneuver. Before the maneuver unit's mission begins, the mortar platoon leader needs to know the route or direction of attack, the time schedule, expected types and locations of enemy contact, and the commander's plan for using the effects of mortar fire support to fight the enemy.

Fire Effects. When a mortar platoon leader does coordinate for fire support, he usually receives a target list, a priority target, and a priority of fire. Rarely, though, is he given the commander's intent for fire support. For example, he is seldom informed as to the desired effects for his fires. Is he to destroy, neutralize, or suppress the enemy? How long are his fire missions expected to last? What are the anticipated requirements for smoke and illumination? What does the commander want the enemy to do as a result of the mortar fires?

To ensure that the maneuver units are properly supported, commanders need to articulate the desired effects of the mortar fires. If they do not, the mortar platoon leader must press for guidance on how the mortars will be integrated into the operation.

Displacement Plans for Mortars. Since the mortars are not normally assigned their own sector or area of operations, problems arise when the mortar platoon needs to displace or conduct resupply activities. Because of the general lack of coordination between the mortar platoon leader and the unit responsible for the AO or sector, mortar vehicles are frequently ambushed while passing through friendly units or destroyed by a friendly unit's mines.

Also, a unit's patrol plans, sectors of fire, and indirect fire targets frequently conflict with the mortar platoon's position. Poor coordination degenerates into uncoordinated vehicle movements and position conflicts.

Mortars have movement requirements that must be coordinated with the maneuver companies. The mortar platoon leader must coordinate with the companies on such matters as landing zones, casualty collection points, resupply routes, radio nets for convoys to monitor, anticipated times for movement, challenge and password, codewords, and crossing into or through another company's sector.

Control of Displacements. If mortars are being probed, attacked, or bracketed by enemy indirect fires, who has the authority to order the mortars to displace? Does the authority for the decision rest with the mortar platoon leader, the S-3, the FSO, or the maneuver commander who is responsible for the AO or sector the mortars are in? This frequently becomes a critical issue at the JRTC as the platoons attempt to displace under OPFOR pressure. Without prior coordination, the platoon can easily move from enemy

contacts into friendly unit firefights.

There is no proved solution to this problem, but the mortar platoon leader needs to receive guidance from his S-3 or commander that is consistent with the battalion's scheme of maneuver.

Techniques for Spotting Rounds. Few units adjust their indirect fires. The most common procedure at the JRTC is for a forward observer to call for a fire for effect with the initial fire commands. Consequently, the mortar platoon fires an excessive amount of ammunition but has little effect on the OPFOR.

The major reason for this poor payoff, of course, is that the fires are not adjusted onto the targets. One of the reasons for the lack of adjustment is poor coordination between the mortar platoon leader and the forward observers. For example, the FOs call for a fire for effect but let the enemy target move out of sight before the rounds hit. Also, many fire missions at night that should be adjusted onto a stationary target (an objective or a cache) are not adjusted, because the observer issuing the fire commands cannot see the effects of the HE rounds; and he cannot see the effects of the HE rounds because he failed to coordinate for illumination rounds. Even worse, the maneuver leaders often fail to mention that the rounds will be coordinated with illumination and that the mortars are not within range of the target.

An additional problem is that observers call for fires on targets they cannot see. This causes friendly casualties and wastes ammunition. On the positive side, the FSO occasionally gives the mortars counter-mortar fire commands for targets detected by radar. Although this is an accurate technique for unobserved counter-mortar fires, the units have seldom practiced it at their home stations because the radar that is used is an artillery asset, and the mortars and the FSO rarely deal with each other as a counter-mortar fire team. This indirect fire capability with radar and mortar integration should not be overlooked as a means of improving the accuracy of mortar fires.

Time for Fire Missions. Light infantry forces usually make contact with the OPFOR at a range of about 300 meters. Units in contact call for fire support and want the fire immediately as a way to break contact. In accordance with ARTEP standards, however, the FDC and the mortar crews have more than 10 minutes to adjust their fires onto a target. But in 10 minutes the infantry forces are generally on top of each other. Consequently, the mortar rounds usually have no effect on the OPFOR.

With prior coordination between the mortar platoon leader, the rifle platoon leaders, and the forward observers, the maneuver leaders can plan their schemes of maneuver to create a time and space separation so that fire support can reach the enemy before the infantry closes. This means the maneuver companies and platoons must maintain the current location and status of their subordinate units so that the fires can be cleared without wasting any additional time trying to contact them.

Also, maneuver units can develop maneuver and fire support plans to reduce the time delay associated with the typical adjust fire missions. For example, one technique — depending on the situation — is to fire a marking round into an area before the infantry elements enter it. All fire missions can then be adjusted from the marking round, which means the mortars can save more than five minutes in their adjustments.

Another technique for saving time and improving the responsiveness of the mortars is for the forward observers in the maneuver units to give the 81mm mortar FDC an ongoing situation report so the platoon can shift the mortars to follow a unit's movement. Even if a maneuver unit does not have priority of 81mm mortar fires, the mortar FDC can at least have the data computed so it can expedite any fire mission from that unit.

Logistical Support. Coordination for logistical support beyond the initial deployment is weak. Seldom do battalions push supplies through to the mortar platoon. Generally, the mortar platoon sergeant has to drive to the trains area to pick up whatever supplies are available. This procedure of having the platoon sergeant pick up supplies has its limitations because of the limited cargo-carrying capacity of the HMMWVs. Supplies, especially Classes IV and V, can be much more efficiently transported on a five-ton truck.

If the platoon sergeant does have to make the resupply transactions himself, however, there are some matters that need to be coordinated. For example, how many trucks will he have available to use on his resupply trips? The platoon sergeant can quickly use all of the HMMWV's cargo carrying capacity transporting the basic load for just one mortar, let alone all four. If the platoon has to transport its own supplies, someone (generally the platoon sergeant) may end up spending most of his time on resupply runs if the mortars are firing any number of missions.

Resupply operations can be improved if the platoon prepares logistical packages (LOGPACs) before its deployments; these packages need to include all classes of supply. Of particular importance to the mortar platoon are the Class IV materials to be used in preparing mortar firing positions.

Finally, results of the JRTC experience reflect that the mortar platoon leader, and other specialty platoon leaders as well, should be integrated into battalion level briefbacks. And it is important for all commanders to understand how the effects and timing of the mortar fires can support their schemes of maneuver. It is a lack of coordination and a poor understanding of the integration of the mortars into the scheme of maneuver that is causing mortar platoons at the JRTC to be underutilized.

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